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THE OUTLOOK FOR 1955

This issue of the Review contains adaptations of papers presented at the Conference on the Economic Outlook sponsored by the Department of Economics of this University, held in Ann Arbor on November 11 and 12, 1954.

W.M.

An analysis of statistical indicators that lead, accompany, or lag behind changes in general business conditions.

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Economic Indicators and the Economic Outlook

Geoffrey H. Moore

DURING the past few years the National Bureau of Economic Research has been conducting an investigation of certain methods of analyzing the current business situation. What I shall try to do here is to describe briefly some of the things we have done, and show, by means of the charts that have been distributed, how the results help to provide a basis for describing the economic outlook at the present time.

At the outset I must make one qualifying remark. Our recent research in this field has been on a rather small scale, engaging not more than a half dozen persons altogether. As a consequence, we have had to confine our attention to one or two approaches, picking those that not only seemed to promise useful results but in which we had an accumulation of data and experience. This concentration does not imply advocacy of these methods to the exclusion of others; most such methods are complementary rather than competitive. Economic behavior is such a complicated affair that it would be foolish to expect any single scheme to ferret out all the significant elements in the business outlook.

About the author—

A former teacher at Rutgers University, New York University, and Columbia University, Dr. Moore is Associate Director of Research, National Bureau of Economic Research. He is author of *Statistical Indicators of Cyclical Revivals and Recessions,* and of articles on business cycles.

The Twenty-One Indicators

One approach that we have investigated has been to comb a vast array of economic time series and find those that seemed to be most consistently related to business cycles. Back in 1950 this investigation turned up some 21 series that were screened out of a collection of about 800.

Some statistical screening devices were designed to utilize the measures that had already been computed, and to select series that had moved up and down with business cycles in roughly *coincident* fashion, or that had *led* or *lagged* behind in an equally consistent manner. The scheme attempted to discount "one shot" successes, by giving longer records more weight.[1]

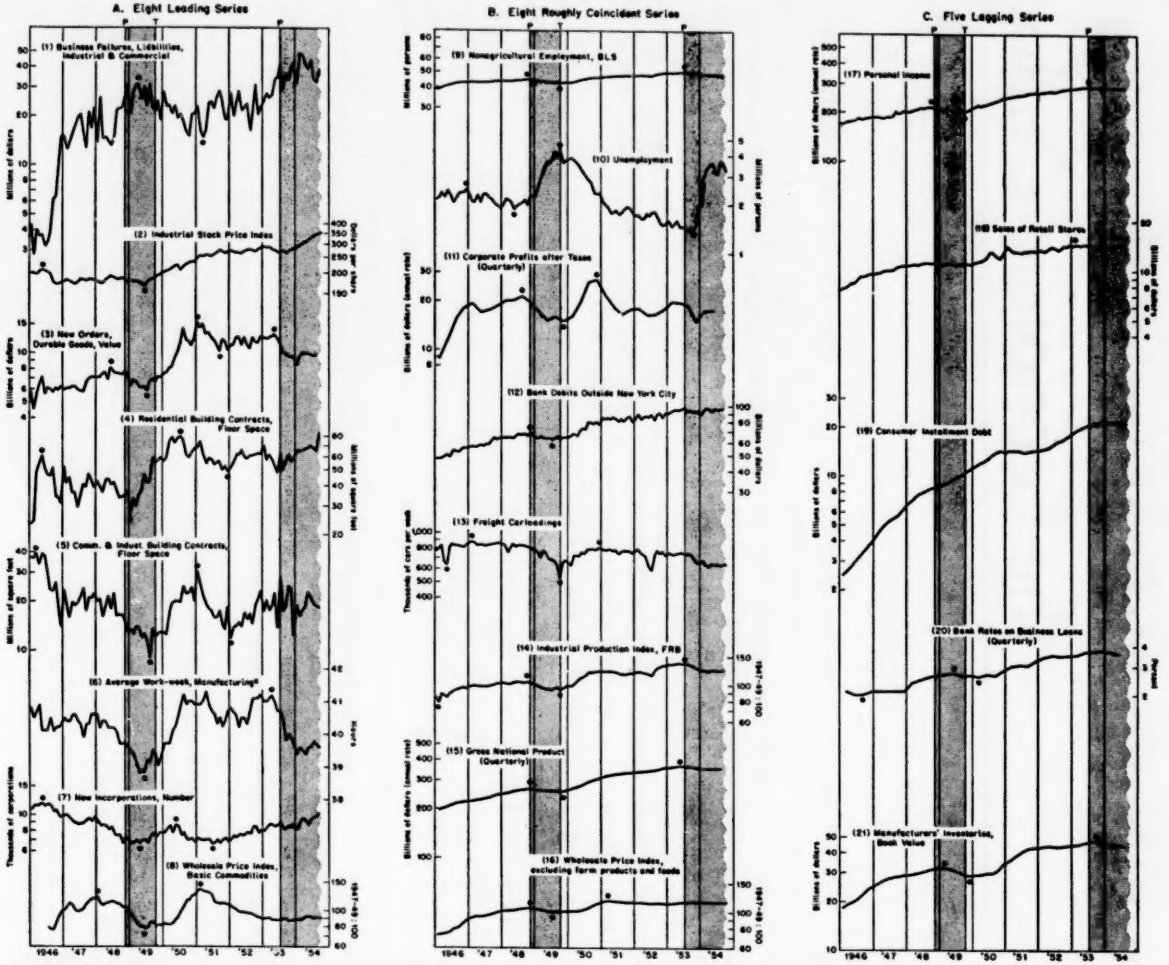
All this statistical testing was applied to cyclical measures ending in 1938. I was able to make some tests of the validity of the scheme outside the period examined by applying it to a fixed period, 1919–38, and seeing how consistently the same series behaved *before* 1919. The results were reassuring, but the real test was, of course, how well they would stand up *after* 1938.

Another aspect of the procedure provided some insurance on this point. The statistical tests were applied to each time series independently. As a result it was quite possible,

[1] These tests are described and the detailed results presented in "Statistical Indicators of Cyclical Revivals and Recessions," *Occasional Paper 31* (National Bureau of Economic Research, 1950).

CHART 1

Twenty-one Statistical Indicators, 1946–54


A. Eight Leading Series
B. Eight Roughly Coincident Series
C. Five Lagging Series
(1) Business Failures, Liabilities, Industrial & Commercial
(2) Industrial Stock Price Index
(3) New Orders, Durable Goods, Value
(4) Residential Building Contracts, Floor Space
(5) Comm. & Indust. Building Contracts, Floor Space
(6) Average Work-week, Manufacturing[a]
(7) New Incorporations, Number
(8) Wholesale Price Index, Basic Commodities
(9) Nonagricultural Employment, BLS
(10) Unemployment
(11) Corporate Profits after Taxes (Quarterly)
(12) Bank Debits Outside New York City
(13) Freight Carloadings
(14) Industrial Production Index, FRB
(15) Gross National Product (Quarterly)
(16) Wholesale Price Index, excluding farm products and foods
(17) Personal Income
(18) Sales of Retail Stores
(19) Consumer Instalment Debt
(20) Bank Rates on Business Loans (Quarterly)
(21) Manufacturers' Inventories, Book Value
1946 '47 '48 '49 '50 '51 '52 '53 '54

a. Arithmetic scale.

Shaded areas represent contractions of business cycles, according to NBER chronology. Dots identify peaks and troughs of specific cycles.

Source: For list of series and historical record, see Statistical Indicators of Cyclical Revivals and Recessions, *Occasional Paper 31* (NBER, 1950), Table 12.
For sources of current data, see Analyzing Business Cycles, *The American Statistician*, April-May 1954, Table 2.

and indeed it did happen, that some of the series that got top rating were of dubious significance from an economic standpoint. Despite their past good records, can one pin one's faith on inner tube production, or the price of inedible tallow, or imports of coffee?

One solution would be to investigate each of these cases, or at least the more plausible ones, and find out whether there is good reason to believe that the record was not a fluke. My solution was to classify the series into economic categories (the classification had, indeed, been devised by Wesley Mitchell), and determine the qualifications of a category by those of the several series that were in it. The 21 selected series were the best current representatives I could find of those categories of series that contained the most promising indicators.

Recent Behavior of the Indicators

Let us turn to the recent behavior of the 21 indicators, as depicted in the first chart. The statistical screening described above would lead one to expect, first, that these series would conform to the business cycles of this period, and, second, that the three groups of series would move in the order indicated, leaders first, roughly coincident series next, and laggards last. There are various ways of determining whether these expectations are met. One way is to summarize the movements of the three groups of series as I have in Chart 2. These are simple statistical summations which I have explained elsewhere[2] and won't take the time to explain now. I shall content myself with the bold statement that the behavior of the three groups of series accorded fairly well with the above expectations at the recession of 1948, the revival of 1949, and the recession of 1953.

As for the current outlook the leading series have been pointing to a recovery since early in 1954. Their prognosis is not quite as unanimous now as it was a few months back, but I think it is still decidedly bullish.

To put it a little differently, we are accustomed to judge whether a business revival has come about by looking for upturns in such measures of activity as aggregate employment, production, and income. These are largely in my middle group of series, and although it is clear that the declines in this group have halted it is not clear, except in the case of bank debits, that they have begun to move upward.

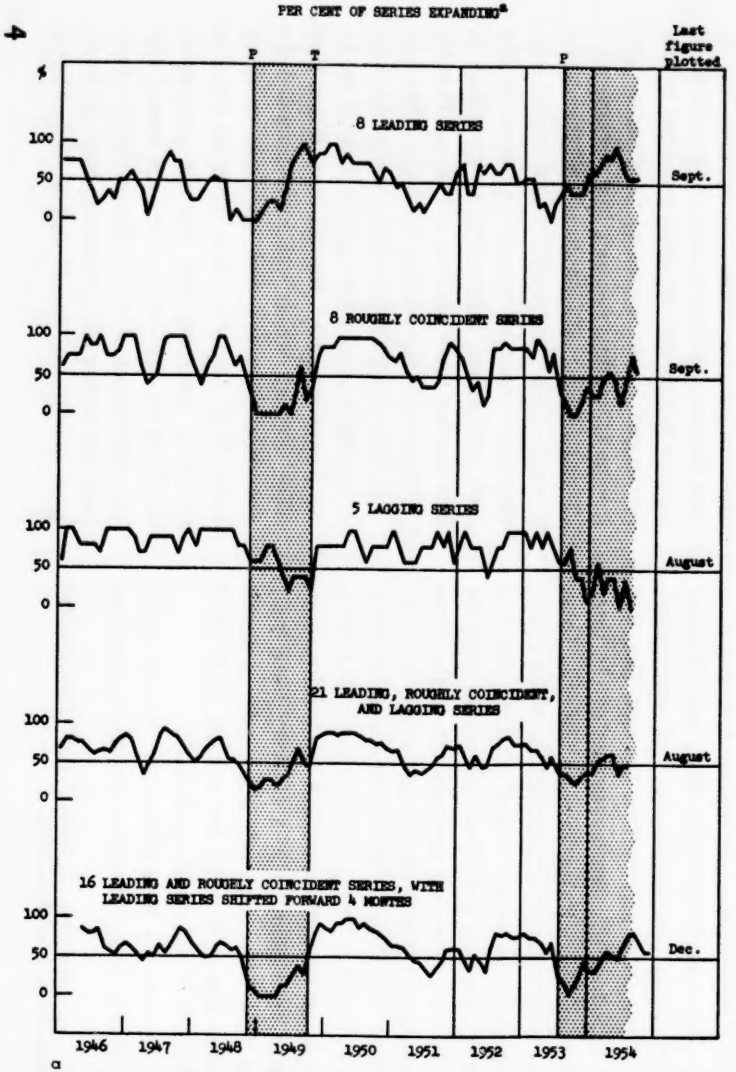
But there are other important aspects of business activity, for example those represented by my first group. If one were to judge solely by these would there be any doubt that recovery has begun? And if orders for durable goods, building contracts, the average workweek, new incorporations, sensitive commodity prices, yes, even stock prices, are all higher than they were a few months ago, and business failures lower, are these not strong indications in themselves of an improvement, not mere stability, in general business conditions? If the opposite were true, as it was in the third quarter of 1953, would there not be reason to feel very differently?

It seems to me that the answers implied in my questions are intuitively reasonable and in accord with the judgment of most observers. Moreover, in my judgment the fact that in past business cycles an improvement in these leading factors has typically preceded an improvement in employment, production, and income is weighty evidence that various sorts of causal relationships manifest themselves through these time series. These causal relationships cannot, of course, be traced by any such mechanical summation as my Chart 2. But they are there, and it is a challenge to every business cycle analyst to think them through.

In this analytical process no one would think of confining his attention just to these 21 series. As I have indicated, the file from which they were selected, which was itself compiled for analytical purposes, had 40 times as many series in it. Many of them were for types of economic measures that are not represented at all on my list—wage rates, the money supply, governmental expenditures—while others were for rather close relatives, such as inventory investment, layoff and accession rates,

[2] See "Analyzing Business Cycles," *The American Statistician*, April-May 1954.

For sources of current data, see Analyzing Business Cycles, *The American Statistician*, April-May 1954, Table 2.



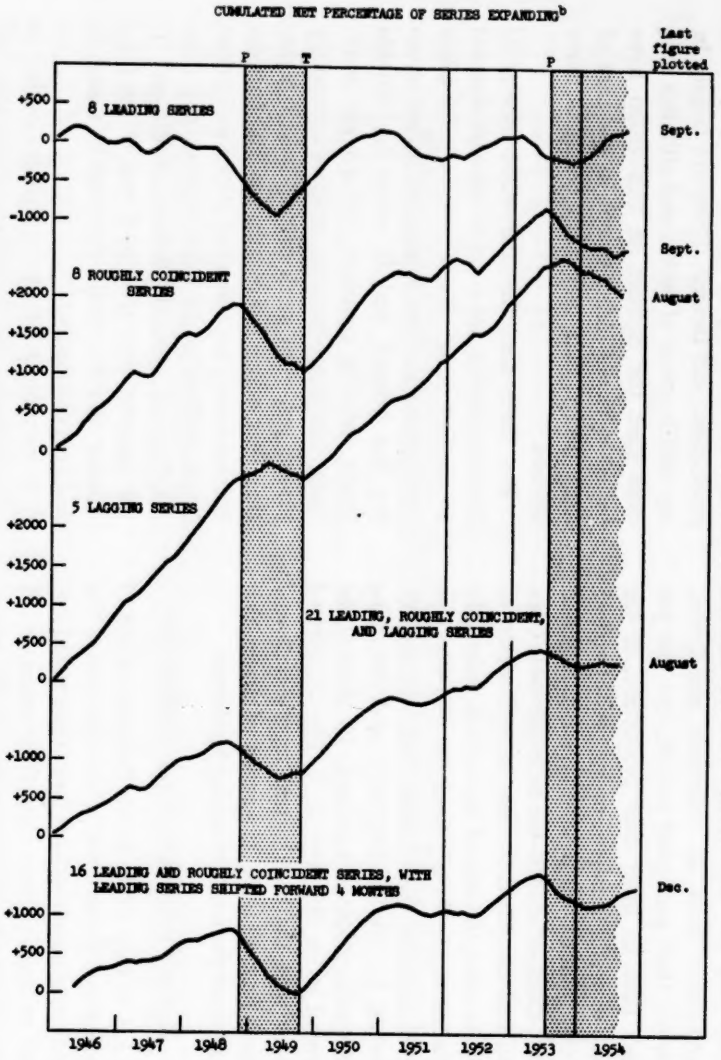


CHART 2
Diffusion Indexes, Twenty-one Statistical Indicators

[a] Based on directions of change in moving averages applied to the individual series. See Analyzing Business Cycles, *The American Statistician*, April-May 1954.

[b] Per cent expanding minus per cent contracting, cumulated from January 1946.

bond yields. Both the distant and the close relatives are essential to an understanding both of business cycles in general and the current economic situation in particular. The 21 indicators scheme is a limited approach. Yet even these 21, because of their inherent significance and past record, provide plenty of food for thought.

Importance of the Lagging Series

For example, consider the *lagging* series, about which I have so far said nothing. One of the most fascinating facts turned up in our investigation of indicators is that when groups of series representing activities that tend to move sluggishly are examined, we find that downturns in these series almost invariably precede upturns in the sensitive leading series, and that upturns in the lagging group precede downturns in the leading group. This happened in cycle after cycle before 1938, and if I read Chart 2 correctly, it has continued to happen since (note especially the right-hand panel). It is as if a revival in the sensitive elements in the complex of economic activities waited upon a recession in the sluggish elements, while upswings in the sluggish factors brought on recessions in the sensitive factors.

One can think of reasons why this can happen. One type of series that tends to lag is inventories, especially of finished goods. It is plausible that when a business contraction is under way, a revival in output is not likely to begin until stocks have begun to decline. Manufacturers' inventories of finished goods, particularly staple, standardized articles, often accumulate for six months or more after a general contraction in business has begun.

For example, in the 1948–49 recession, finished goods inventories kept on rising until June 1949, eight months after the peak in manufacturing output in October 1948 and five months before the revival in November 1949. Again in 1953–54, finished goods inventories did not begin to drop until February 1954, some seven months after production reached its peak (July 1953). The decline in these stocks was negligible until July, 1954, but I'm sure it is one of the things that is beginning to pave the way for an upturn in production.

Other types of lagging series are interest rates, wage rates, and prices of some types of finished goods. These are elements in the costs of doing business, and declines may react favorably and rises unfavorably on business firms' or individuals' willingness to undertake the types of new commitments represented by some of the leading series. I think there is substantial evidence to this effect in some of the business cycle studies we have made at the National Bureau. Take, for example, the movements of manufacturing wage rates (or hourly earnings) and hiring rates (or so-called gross accession rates). We find that the latter have a clear tendency to lead changes in employment and business activity, while the former show long lags. But almost invariably since 1920 cyclical downturns in wage rates have preceded cyclical upturns in hiring rates, and cyclical upturns in wage rates have preceded cyclical downturns in hiring rates.

The lagging series are important for another reason. Their very insensitivity to the conditions that produce sharp movements in other measures may be turned to good account by the analyst who is endeavoring to discriminate between the severe contraction and the minor dip. The fact that a year after the 1948 recession began personal income had dropped only slightly, retail sales hardly at all, and installment debt had increased, surely indicated the mildness of that decline. And the fact that we can make similar statements a year after the 1953 recession began points to a similar conclusion now.

Diffusion Indexes

So much for the 21 indicators. Another approach to the problem of forecasting that we have been exploring is what we have come to call "diffusion" analysis. For this purpose we have constructed "diffusion indexes," which measure the *scope* of an expansion or contraction in the economy. It has long been known,

[b] Per cent expanding minus per cent contracting, cumulated from January 1946.

of course, that our economy has been subject to *general* waves of prosperity and depression. Our experiments with diffusion indexes are attempts to find out how general they are, whether the degree of generality varies with the stage of the cycle, whether some cycles are more general than others, and what the causes and consequences of these variations are.

What we have found out, in brief, is that the scope of an expansion or contraction invariably diminishes before it ends, and that vigorous expansions and severe contractions are more widely diffused than mild ones. These findings are firmly established. The question that we have been struggling with, and which is not yet fully resolved, is whether they are of practical value in forecasting.

We have already had some examples of diffusion indexes in Chart 2. The curves in the left-hand panel show the proportion of series, in several groupings of the 21 indicators, that are expanding at any one time. Further examples are given in Chart 3.

All these charts bear witness to the first finding that I mentioned, the tendency for the scope of an expansion or contraction to diminish before it ends. The top curve in Chart 3, labeled "all-inclusive" sample, exhibits this most clearly. This index was constructed by Arthur Burns, some years before he assumed his present responsibilities, from virtually the entire collection of monthly ecenomic time series in the National Bureau's files. Its smooth, wavelike character, and the fidelity with which it matches the business cycle expansion and contraction intervals, make it the answer to a statistician's prayer. It is extraordinary, also, in that it is based on the most elementary information concerning the component series, merely the dates of their cyclical highs and lows; it uses no information concerning amplitudes of change, and the series are not even weighted according to their importance.

Unfortunately the construction of this particular type of diffusion index requires a large dose of hindsight—one must identify the cyclical highs and lows in the component series, and as everyone knows it is difficult to do this until these highs and lows have made history. The other indexes in our charts do not depend on hindsight, but neither do they have the elegant properties of Burns' curve.

However, they do have traces of these properties. For example, note how the black dots that mark the highs in these diffusion indexes virtually all land in the white areas on the charts, the business cycle expansions; whereas the dots that mark the lows land in the shaded areas, the contractions. A tabulation shows that these highs and lows, in many of the indexes, are largely concentrated 6 to 12 months before the terminal dates of the business cycle expansions or contractions.

Diffusion Indexes of Anticipations Surveys

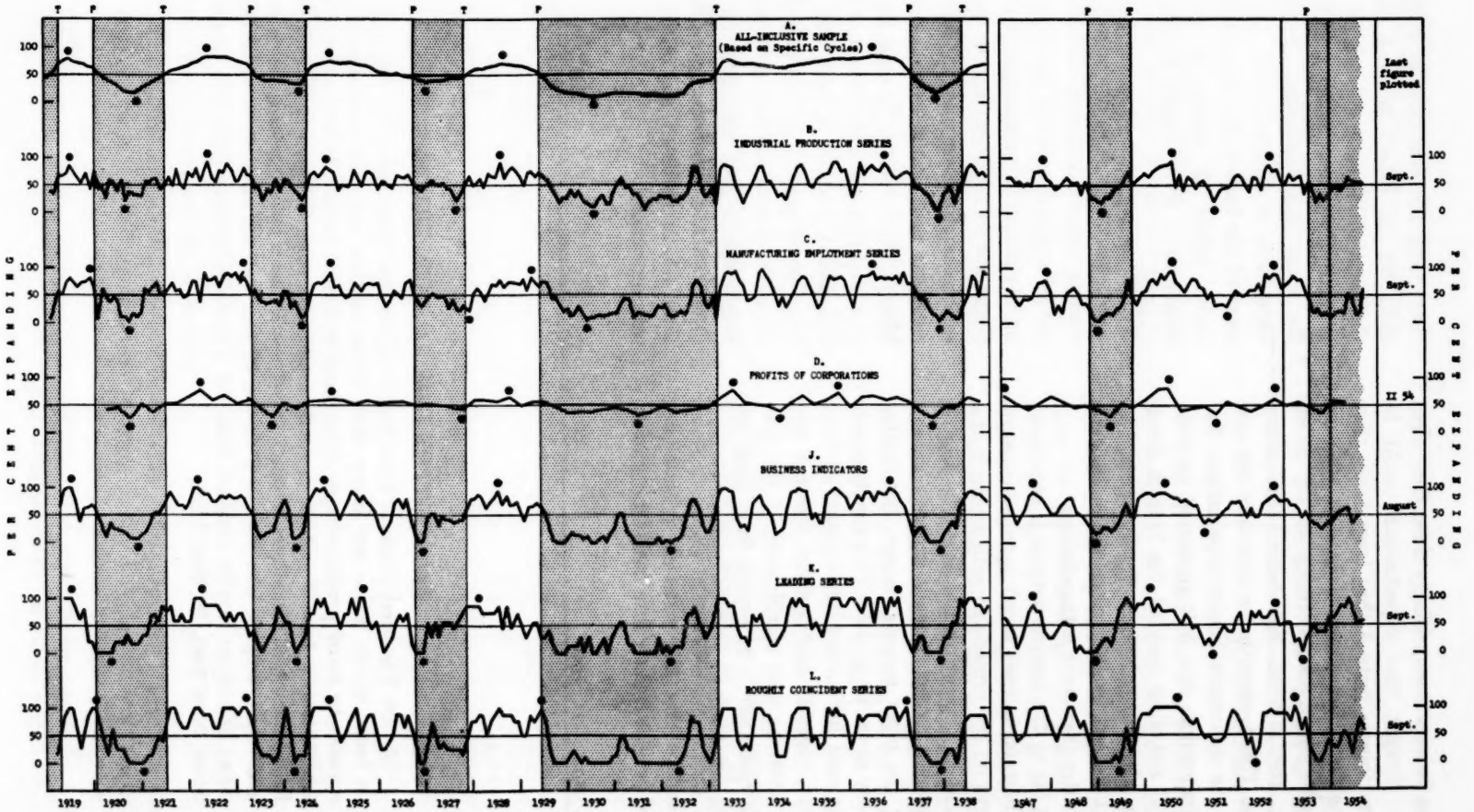
Now let us consider diffusion indexes which are of a somewhat different type. They record some of the results of the considerable number of nationwide *anticipations surveys* that are now being conducted: the Dun & Bradstreet survey of businessmen's expectations, the railroad shippers' forecasts, the survey of consumers' income and other expectations carried on by the Survey Research Center here in Ann Arbor, and the plant and equipment investment surveys of the Department of Commerce. The shippers and investment surveys obtain quantitive information on the amount of change expected; the other two simply record whether the individual forecast is up, down, or "no change." In each instance, however, the diffusion indexes we have constructed from these materials use only the latter type of information.[3]

On the whole, the comparison between the anticipations diffusion indexes and actual dif-

[3] For the Dun & Bradstreet survey and the Survey of Consumer Finances the unit is the individual firm and the individual spending unit, respectively, and we have computed the per cent expanding by taking the ratio of reported increases to total reported increases and decreases, omitting reports of "no change," "uncertain," etc. For the shippers' forecasts and the investment survey the unit is the commodity group and the industry, respectively, and the (very few) "no change" entries are distributed equally between increases and decreases.

CHART 3

Diffusion Indexes Based on Short-period Directions of Change
1919–38, 1947–54



Shaded areas represent business cycle contractions; unshaded areas, expansions. Dots identify peaks and troughs of specific cycles in the diffusion indexes.

fusion indexes is surprisingly close. One might have thought that expectations would be flighty things; instead they keep fairly close to the facts. Sometimes, it appears, they are no more than extrapolations of the recent past; the forecast lags behind the actual curve. This appears to be especially the case with the consumers' income expectations. But my impression, and it is supported by some careful statistical tests of the Dun & Bradstreet surveys by Millard Hastay at the National Bureau, is that most of the forecasts are better than mere extrapolations.

As far as the current outlook is concerned, the diffusion indexes based upon anticipation surveys do not provide us with as much of a forward look as we should like. The Dun & Bradstreet survey strongly suggests an upturn; the other surveys do not, but neither are they so far up to date. This simply points to the need for further development of these surveys, together with further research into their meaning and significance, if the economic forecaster is to exploit fully their potential value.

Summary

I believe that the materials I have presented provide a fairly firm basis for optimism concerning the near-term economic outlook. Since we can expect to see a diminution in the scope of the contraction before it ends, it is gratifying to find evidence in Chart 3 that the scope has diminished. Finally, looking once more at Charts 1 and 2, we see that most of the factors that one would expect to revive before an upturn in production or employment have indeed revived in recent months.

We cannot be sure, of course, that we are reading current evidence correctly, or that our generalizations about the process by which broad changes in business activity are brought about, are sound. Moreover, we cannot expect such generalizations ever to provide a fully adequate basis for determining the outlook. Always there will be "special factors," both of a kind that we might expect to know about and assess, and of a kind that we cannot know about since they can only be observed when the future unfolds. But we should be better able to deal with these special factors if we can establish some generalizations like those I have discussed, and utilize them when we peer ahead.

EARLY OPPOSITION TO FAST TRAVEL

A new Twentieth Century Fund report recalls that while today the emphasis is all on faster travel, it was not always thus. When coaches first came into use they were opposed by many people, among whom were makers of swords, belts, and pistols, who felt the switch from horseback to coach would ruin their business; cloth makers, who feared the added cleanliness of coach travel would mean fewer garments being bought; and tavern keepers, who foresaw a decline in beer and ale sales en-route. Information about this report may be obtained from the Twentieth Century Fund, 330 Forty-second Street, New York, 36, New York.

No very great change in the net effect of budgetary factors—Federal, state, and local—is indicated.

The Fiscal Outlook

R. A. Musgrave

THE budget outlook for fiscal 1955, as presented in the Midyear Review, is given in Table 1, together with comparative figures for preceding years.

TABLE 1
Summary View of Federal Budget
(In billions)

	Fiscal Years				
	1948	1950	1953	1954	1955
Budget Basis					
Expenditures	$33.1	$39.6	$74.3	$67.6	$64.0
Receipts	41.5	36.5	64.8	64.6	59.3
Deficit or surplus	+8.4	−3.1	−9.4	−3.0	−4.7
Cash Basis					
Expenditures	36.9	42.0	76.8	72.0	69.6
Receipts	44.9	42.4	71.5	71.5	67.5
Deficit or surplus	+8.0	+.4	−5.3	−.5	−2.1

Source: *Midyear Budget Review*, September 14, 1954.

Both the 1954 and the 1955 budgets have curtailed total expenditures, the 1955 level being estimated at $10 billion below the peak level of 1953. As shown in Table 2, some 80 per cent of this reduction is in national security programs. It is concentrated very largely in the Department of Defense, with about one-half taking the form of reduced expenditures for procurement and production. Only 20 per cent of the total reduction is in expenditures other than the national security programs, and one-half of this is accounted for by foreign aid. Expenditures for domestic programs other than national security are reduced by somewhat over $1 billion, or by about 5 per cent of their 1953 total.

TABLE 2
Budget Expenditures by Major Programs*
(In billions)

	Fiscal Year					
	1948	1950	1953	1954	1955	1953–1955
National Security Programs, total	$11.4	$12.9	$50.3	$46.2	$41.9	$ −8.4
Dept. of Defense			43.6	40.1	35.5	−8.1
Mutual Military Program			3.8	3.5	3.3	−0.5
Atomic Energy			1.8	1.9	2.2	+0.4
Stockpiling			1.0	.7	.9	−0.1
Other Programs, total	21.7	26.7	24.0	21.4	22.1	−1.9
Interest	5.2	5.7	6.6	6.5	6.6	+0.1
Veterans	6.5	6.5	4.3	4.3	4.4	+0.1
International Affairs	4.5	4.8	2.2	1.7	1.1	−0.8
Agriculture	0.8	2.8	2.9	2.6	2.8	−0.1
Social Security, etc.	1.6	1.5	1.9	2.0	1.9	..
Natural Resources	0.8	1.4	1.4	1.2	1.1	−0.3
Transportation	1.1	1.5	2.1	1.8	1.8	−0.3
Housing	0.1	−0.3	0.5	−0.5	0.4	−0.1
Education, etc.	0.1	0.1	0.2	0.2	0.3	+0.1
General Government	1.4	1.2	1.4	1.2	1.2	−0.2
Other	0.3	0.3	0.4	0.4	0.4	..
Grand Total	33.1	39.6	74.3	67.6	64.0	−10.3

* Figures do not necessarily add due to rounding.

Receipts

As shown in Table 3, budget receipts for fiscal 1955 are estimated at about $5 billion below the levels for fiscal 1953 or 1954. This reduction reflects revenue losses from various changes in the law, including (1) a 10 per cent cut in income tax rates, effective January 1, 1954, and costing about $3 billion; (2) elimination of the excess profits tax, effec-

About the author—

Dr. Musgrave is Professor of Economics in this University.

tive the same date, and costing $2.4 billion; and (3) excise reductions, effective April 30, 1954, and costing approximately $1 billion.[1] As against this, there was a revenue gain of $1.4 billion from the increase in the rates of employment tax, but this is not reflected in the so-called net receipts. Revenue losses from the Revenue Act of 1954 are estimated to amount to $1.4 billion, including $800 million of relief to individuals and $600 million to corporations. Total revenue losses due to all these changes amount to $7.0 billion. The five percentage point reduction in the corporation tax, scheduled for April 1 of 1954, was postponed for one year.

TABLE 3
Budget Receipts*
(In billions)

	1953	1954	1955
Individual income taxes	$32.8	$32.4	$30.0
Corporation income taxes and excess profits tax	21.6	21.5	18.7
Excise taxes	9.9	10.1	9.2
Estate and gift taxes	0.9	0.9	0.9
Employment taxes	5.0	5.4	6.4
Customs	0.6	0.6	0.6
Miscellaneous receipts	1.9	2.2	2.5
Subtotal	72.7	73.1	68.2
Deduct:			
Appropriation to Old Age Trust Fund	4.1	4.5	5.4
Appropriation to Railroad Retirement Fund	0.6	0.6	0.7
Refunds of receipts	3.1	3.4	2.9
Total Budget Receipts	64.8	64.6	59.3

* Totals do not necessarily add due to rounding.

Deficit

The indicated reduction of expenditures and receipts leaves a budget deficit (see Table 1) of $4.7 billion for fiscal 1955. This deficit exceeds that of 1954 and thus reverses the shrinkage of deficit from 1953 to 1954. Whereas the 1953 to 1954 decline in expenditures was not accompanied by any significant decline in tax yield, the estimated cut in expenditures for 1954 to 55 is outstripped by the concurrent decline in tax receipts.

For purposes of economic policy, the cash deficit is much the better figure; but, as shown in Table 1, the picture is essentially the same on either basis. While the cash deficit declined from $5.3 billion in 1953 to $500 million in 1954, the estimate for 1955 shows a renewed increase in deficit to $2.1 billion.

[1] Figures refer to revenue losses for fiscal 1955.

Outlook for Calendar 1955

The revised estimates for the fiscal year 1955 cover the first half of the calendar year 1955. In order to obtain a picture for the entire calendar year, the first half of fiscal 1956 must be included as well. As far as the expenditure side of the budget is concerned, the problem remains primarily one of national security programs. While there may be cutbacks in some of the non-defense programs, others are likely to increase. Considering the outcome of the election, there is little reason to expect that the new Congress will legislate sharp reductions in the established civilian programs. And I do not see any substantial cuts in civilian outlays that the executive branch could make in the absence of such legislation.

The crucial question remains one of possible curtailment in defense expenditures. For the fiscal year 1955, these programs continue to absorb over two-thirds of the total. While defense expenditures have now dropped to $8 or $9 billion below the peak level of the Korean war, they are still over $40 billion. What has occurred is but a small step back toward the pre-Korea level of slightly above $10 billion. Obviously, no one looks for an early or even eventual return to such levels. Rather, the question is whether we shall

remain for the time being at a plateau of, say, $40 billion, or whether we should expect a further cut, of, say, $3–5 billion in fiscal 1955.

Careful reading of the Midyear Budget Review suggests that the program for fiscal 1955 is taken to constitute a "balanced position", and there is no indication that substantial further cuts are in the offing for 1956. Evidently, conjecture on this point involves matters of military, foreign and political as well as fiscal and economic policy. Should we move into a situation where (one hopes) there would have a tax reduction (for fiscal 1956) of, say, $3 to $4 billion, half corporation and half personal income tax. To this we might add some further losses to allow for delayed effects of this year's Revenue Act, thus obtaining a total reduction of at least $4 billion. Assuming such a reduction to come about, continuation of the fiscal 1955 level of expenditures would produce a cash deficit of over $6 billion.

Barring a sharp deterioration in economic conditions, such a deficit will hardly be acceptable to the Administration, or, for that matter, to Congress. Desire to go through with the indicated tax cuts, therefore, may well lead to demand for more or less equivalent expenditure reductions. From what has been said before, it is evident that such cuts would have to be very largely in the defense program. On this basis (i.e., on the assumption of a $4 billion cut on both sides of the budget), the budget outlook through the calendar year 1955 might be as shown in column A of Table 4. I am not saying, of course, that this is the way the budget *should* be planned; I am merely indicating what may be a *likely* development.

Another possibility is that further tax cuts

TABLE 4
Cash Budget Outlook for 1955–56
(In billions)

Unadjusted Totals	Assumption A[1]			Assumption B[2]		
	Expenditures	Receipts	Surplus or Deficit	Expenditures	Receipts	Surplus or Deficit
Calendar Year 1954						
1st quarter*	$16.4	$23.4	$+7.0			
2nd quarter*	18.3	18.9	+0.6			
3rd quarter	18.0	14.8	−3.2			
4th quarter	17.7	13.5	−4.2			
				Same as for Assumption A		
Calendar Year 1955						
1st quarter	17.2	21.6	+4.4			
2nd quarter	16.7	17.6	+0.9			
3rd quarter	16.6	14.2	−4.4	$16.8	$14.5	$−2.3
4th quarter	16.6	12.9	−3.7	16.8	13.2	−3.6
Fiscal 1955**	69.6	67.5	−2.1	69.6	67.5	−2.1
Fiscal 1956	66.6	64.5	−2.1	67.6	66.5	−1.1
Calendar 1954	70.4	70.6	+0.2	70.4	70.0	+0.2
Calendar 1955	67.1	66.3	−0.8	67.5	66.9	−0.6

* Reported figures.
** Official estimate.
[1] Assumes that both expenditures and receipts for fiscal 1956 are $3 billion below fiscal 1955.
[2] Assumes unchanged tax rates and a $2 billion cut in defense expenditures.

is less immediate threat of military involvement, ideas as to what is considered a "necessary" military budget will become more flexible. This in turn might lead to a situation where tax developments come to have an important bearing on the level of defense expenditures.

Possible Tax Cuts

As noted before, the corporation income tax is due to be reduced by five percentage points on April 1 of next year. If this cut is permitted to go into effect, chances are that next year's Congress will wish to match it with reductions in personal income tax so as to make a more acceptable package. If so, we

of any sort will be postponed until the budget is balanced. Such a picture (involving unchanged tax rates and only a $2 billion cut in defense expenditures) is shown in column B of the Table. Of the two, column A seems the more likely prospect to me.

The figures shown in Table 4 imply a level of taxable income, profits, and consumer expenditures for the fiscal year 1956 similar to that for fiscal 1955. That is to say, it is implied that the gross national product for calendar 1955 will continue at about the 1954 level of $356 billion. If it should return to the 1953 level of $365 billion, tax yields may be expected to be $2 billion higher, and the deficit to be $2.5 billion lower. In this case, the cash budget for 1956 would be about balanced on the basis of assumption A. Should the level of income *decline*, yields will be reduced correspondingly, and sharper reductions in tax rates would be called for.

Looking ahead at 1955, assumption A shows a slightly restrictive influence on the part of the federal budget, but this may well be offset or more than offset by an expansion in state and local expenditures. No very great change in the net effect of the budgetary factors seems to be in the cards.

The Size of the Budget

Just how "big" is the budget now and, therefore, how much should we expect it to decline in the future?

In order to assess the "level" of budget expenditures in a meaningful sense, this level must be considered relative to that of total expenditures in the economy. Such a comparison of public expenditures and gross national product is shown in lines 8 to 14 of Table 5.

TABLE 5
The Level of Government Expenditures*

	Fiscal Years					
	1929	1940	1945	1948	1953	1955
In Billions						
1. Federal: War related[1]	$ 1.9	$ 2.5	$ 88.5	$26.5	$62.8	$53.4
2. Other	0.7	6.5	11.5	7.2	11.5	10.6
3. Total	2.6	9.0	100.3	33.7	74.3	64.0
4. State[2]	1.9	3.4	3.6	7.6	12.0	(13.0)
5. Local[3]	6.2	5.6	6.0	7.7	(12.5)	(13.5)
6. Grand Total (3+4+5)	10.7	18.0	109.9	49.0	98.8	(90.5)
7. Non-War Related Total (2+4+5)	8.8	15.5	21.1	22.5	36.0	(37.1)
As Percentage of G.N.P.[4]						
8. Federal: War Related	1.8	2.9	41.0	10.1	17.6	15.0
9. Other	0.7	7.5	5.4	2.9	3.2	3.0
10. Total	2.5	10.4	46.4	13.0	20.8	18.0
11. State	1.8	3.9	1.7	3.1	3.3	3.6
12. Local	6.0	6.5	2.8	3.1	3.5	3.8
13. Grand Total (10+11+12)	10.3	20.8	50.9	19.2	26.7	25.4
14. Non-War Related Total (9+11+12)	8.5	17.9	9.9	9.1	10.0	10.4

* For details on earlier years, see R. A. Musgrave and J. M. Culbertson, "The Growth of Public Expenditures in the United States, 1890–1948", *National Tax Journal*, June, 1953, Vol. VI, No. 2. Figures in parentheses are very rough estimates only.

[1] Includes national security expenditures, veterans expenditures, and appropriate fraction of interest payments on public debt.

[2] Excludes expenditures financed from Federal grants, and unemployment insurance benefit payments. Includes grants to local governments.

[3] Excludes expenditures out of grants from State governments, and expenditures of public enterprises.

[4] The G.N.P. for the fiscal years under consideration is $103.8, $86.3, $214.3, $246.1, $367.5 and for 1955 an assumed $357.0 billion.

Let us begin with line 13 and consider the over-all level of budget expenditures, including all levels of government. We find (1) that the ratio of public expenditures to G.N.P., which had risen drastically during World War II, had about returned to its pre-war level by 1948, the trough of post-war disarmament; (2) that the increase in the level of expenditures during the Korean War was in

no way comparable in scope to that of World War II; and (3) that the decline from the 1953 peak to 1955 will have retraced only a small part of the increase from pre-Korea levels. In other words, 1953 was hardly a war economy; and to the extent that it was, we have hardly left it. In all, the ratio of government expenditures to G.N.P. is about 25 per cent higher for 1955 than for 1940.

Next, we note that this higher level is due entirely to the increased need for military outlays. To bring out this point, I have divided Federal expenditures into "war-related" and other items. Combining these other items with State and Local expenditures, we obtain a picture of what has happened to the level of "civilian" government expenditures. This is shown in line 14 of the Table. You will find that the ratio of civilian expenditures to G.N.P., as projected for 1955, is greatly below that for 1940 and fairly close to that for 1929. In other words, the widely held belief that over the last few decades there has been a continuous budgetary expansion is justified only with reference to defense expenditures. The level of civilian expenditures of government has risen more or less in step with the growth of the economy, but not faster.

There are some other interesting points in this picture—such as the fact that state and local expenditures have tripled since 1940, while the civilian expenditures of the Federal government have risen by less than 80 per cent—but these cannot be developed here. For the time being, the dominant factor remains the level of Federal defense expenditures; and I see little chance that they will be reduced drastically for the time being. This means that a high budget economy is likely to be with us for some time to come. While no man in his right mind will rejoice in a situation which requires high defense expenditures, we might as well recognize that they continue to be a major factor of strength in the economic outlook.

What will happen if and when a sharp reduction in defense expenditures becomes permissible is another matter. The reduction, at best, will not compare in sharpness to that of 1946–48; but the ability of increased private expenditures to fill the gap will hardly be of post-World War II proportions either. Over the year, much may depend on what will happen to the level of public expenditures in the civilian sphere, a point which raises interesting prospects not only for Federal but in particular for State and Local finances.

WOMEN AT WORK

The proportion of women among all persons at work in the United States increased from 17 per cent in 1890 to 24 per cent in 1940 and was close to 30 per cent in 1952, notes a Twentieth Century Fund report. Information about this report may be obtained from the Twentieth Century Fund, 330 West Forty-second Street, New York 36, New York.

A survey of interest rates, credit availability, saving, demand for funds, Treasury operations, and Federal Reserve policies.

Monetary and Credit Policy in 1955

Paul W. McCracken

THE monetary and credit situation in 1954 has generally reflected a continuation of the ease which began with the turnabout in mid-1953. Short-term rates, as might have been expected, have experienced the largest declines. Long-term rates also dropped, with corporate AAA's now yielding substantially below 3 per cent, compared with a mid-1953 peak of 3.42. The rate on high-grade municipals is now about 30 per cent below last year's peak, in spite of the substantial supply of new issues coming into the market.

Credit Policy and Business Conditions

These developments are generally known and require no further belaboring here. My comments, therefore, will be centered around three interrelated questions. (1) What has been the impact of these developments for the economic situation? (2) What does 1955 look like for the money and capital markets? (3) What are some of the policy questions which we shall be hearing more about in the months ahead?

It is not so long ago that there would have been considerable disposition to question whether monetary and credit matters had much to do with changes in the level of business activity. The fact, therefore, that this topic has been given a spot on the Economic Outlook Conference program is itself significant.

It suggests that monetary and credit developments do have something to do with the economic situation. I believe that they do, and I believe that events of recent months provide a fairly convincing demonstration of this point. The importance of these monetary and credit changes has been indicated in at least three areas of the economy.

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Orderly Inventory Liquidation

1. The inventory liquidation of the last year has been exceptionally orderly. We would all agree, I think, that this was a very fortunate development. The raw material for a more severe liquidation was in prospect a year ago. The cut-back in the defense program itself was almost certain to produce a considerable inventory run-off. Indeed to call the 1953 decline an "inventory recession" is to overlook the fact that even in absolute terms the decline in national security expenditures has been greater than the downward pressure on G.N.P. arising out of inventory liquidation.

The prompt and vigorous turnabout of credit policy in mid-1953 was therefore particularly fortunate. It meant that unlike some other recessions (e.g. 1920–21) we did not have to live with the explosive combination of a congested inventory situation and tight credit.

The results could have been substantially different if lending officers had been breathing down the necks of businessmen already harrassed by uncomfortable stocks of goods. As it was, the inventory adjustment could develop in an orderly fashion, with cumulative pressures held to a minimum. Indeed the in-

ventory reversal of $9.4 billion from the second quarter of 1953 to the third quarter of 1954 was only 2.5 per cent of the prior G.N.P. peak, less than the 3.7 per cent figure for 1949–49. This is all the more remarkable in view of the many special supports in this earlier period not present last year. For this the monetary policy turnabout of 1953 can assume some of the credit.

The Supply of Money

2. Unlike most other recessions (even 1948–49) this one was accomplished by an *increase* in the money supply. The privately held money supply is now about $7 billion above a year ago. There is, of course, a difference of opinion about how much changes in the money supply can affect the level of business activity. There should be little argument, however, with the contention that in a recession the difference between an expanding and a contracting money supply can be an important one. It seems quite clear that this continued expansion during the last year must be included as one of the factors moderating the force of the decline.

3. The prompt and continued ease in the money and capital markets since last year has given them a new mobility and resiliency, enabling these markets to perform their orthodox allocative function. With cumulative and disorderly movements avoided, the market could divert funds to parts of the economy where needs were still pressing.

In mid-1953 the residential construction boom was threatened with starvation for mortgage funds. The intense corporate demand for funds, with rates on prime issues crowding 3½ per cent, was inevitably tending to dry up the supply of mortgage money.

Easier credit conditions have enabled the flow of mortgage funds to be maintained. Indeed the volume of money going into nonfarm mortgages was about 5 per cent larger in the first six months of 1954 than during the same period last year—an unusual (and helpful) development for a recession year.

Market developments also enabled a substantially larger volume of municipal obligations to be sold. In the first seven months this year $4.0 billion of these securities were marketed, 25 per cent above the same period for 1953. The resulting strong volume of state and local construction projects has been an important support in the business situation. Some issues were sold this year which would have had trouble in last year's market, and this meant some construction activity was delayed to 1954 by developments in the credit and capital markets.

This is not to say that credit developments and policy deserve exclusive credit for the fact that the recent recession was held to moderate and orderly proportions. But it would clearly be unrealistic to say that these matters were unimportant or irrelevant.

Interest Rate Prospects for 1955

What are monetary, credit, and interest rate prospects for 1955? It is to these developments for 1955 that we must now turn.

Here we are fundamentally dealing with a *market*—the market for money and credit. Therefore, we are really asking what the nature of the supply and demand forces in this market will be. Answering this question would be considerably simplified if we could first be told how strong the general economic situation is to be. This, of course, says little more than that each of the papers on this program could more readily have been prepared if all the others could have been available first.

It is very difficult to know whether the current flow of savings is par for the course, too low, or too high. It is lower than would be indicated by an extrapolation of the prewar relationship between personal savings and disposable personal income. This may mean, as has been suggested, a permanent shift downward in this relationship between saving and income. The prewar par may no longer be relevant.

On the other hand a flow of these savings at 8 per cent of disposable income, the rate since 1950, seems high. The average for 1929,

1937, and 1940 (the better years of the pre-war decade) was about 5.3 per cent. This would suggest the possibility of some decline in the rate of saving for next year.

An important question here, of course, is whether this higher rate of savings is reflecting an extension of insurance programs, pension plans, and other types of *contractual* savings arrangements. If so, the relatively higher rate of savings may well be with us to stay.

That these contractual savings programs have expanded substantially in recent years is generally recognized. It may, therefore, come as something of a surprise that the flow of these committed savings is not a significantly larger share of disposable personal income now than in 1951. The S.E.C. estimates of personal saving through government and private insurance programs in the first half of 1954 were 3.4 per cent of disposable personal income, a figure which has changed very little in recent years.

What we might call *volitional savings* on the other hand, have shown a spectacular increase. These forms of savings, (time and savings deposits, savings and loan association shares, and security purchases) are now running at the rate of over 6 per cent of disposable personal income, double the 1951 rate.

It is doubtful if this is a trend which can safely be extrapolated. This high rate of volitional savings is a reflection of the relatively low level of personal expenditures, particularly on durables, during this period. Business, therefore, ought to be able to attract some of these dollars back into the market place through improved products and merchandising. And my own guess would be that a very moderate reversal of this trend toward a higher savings rate will begin next year.

The Demand for Funds

What about the demand for funds? There seems to be no very useful way to explore this matter other than to break the total demand for funds into subdivisions. Five such subdivisions seem to be particularly worth comment: short-term business credit, consumer credit, mortgage demand, business demand for long-term money, and government demand for funds. Let us examine each of these in turn.

1. *Short-term business demand.* The demand for this type of credit ought to be somewhat larger next year for two interrelated reasons. First, the level of business activity generally will be higher, with an accompanying demand for credit to take care of larger working capital requirements generally. Second, the inventory liquidation stage of the current (or recent) recession ought to be pretty well behind us. We could, in fact, see a resumption next year of some inventory accumulation, at least to the extent of the roughly $2 to $2.5 billion per year required for the long-run growth of the economy. Since additions to inventory must usually be carried on credit, such an inventory turnabout should be associated in 1955 with a more or less corresponding rise in the demand for bank

SELECTED COMPONENTS OF INDIVIDUAL SAVING
(Dollar amounts in billions)

Year	Disposable Pers. Inc.	Insurance Saving		Volitional Saving	
		Amount	Percentage of Disposable Income	Amount	Percentage of Disposable Income
1950	$206.1	$3.1	2.4%	$3.9	1.9%
1951	226.1	6.8	3.6	6.7	3.0
1952	236.9	8.6	3.6	11.5	4.9
1953	250.1	9.4	3.8	14.1	5.5
1954*	252.7	8.6	3.4	15.8	6.2

Source: Savings estimates from the S.E.C. Disposable personal income from U.S. Department of Commerce. Volitional Savings are savings through time and savings deposits, savings and loan associations, and purchases of securities.
* First half only—savings estimates multiplied by two.

credit. If so, companies whose needs for credit have been relatively low this year (importantly those in the heavy goods lines) should be showing up at the desks of the lending officers more frequently in 1955.

2. *Consumer credit.* The volume of consumer credit, which declined more than seasonally during the early part of this year, ought to increase in 1955. This increase would be reflecting a higher level of business activity generally and a larger volume of outlays on those durable goods which particularly give rise to consumer installment borrowing. This should in turn increase the demand for credit accommodation on the part of the sales finance companies.

3. *Mortgage demand.* Since no serious letup in the demand for new homes seems to be in sight, the demand for mortgage money ought also to continue at about present levels. Indeed it seems to be a settled and quite bipartisan objective of public policy to see to it that a high level of residential construction does continue.

A continuation of current residential construction levels in fact, will probably be accompanied by an increased demand for mortgage money as those with progressively less indigenous financial ability are brought into the market. Therefore, the demand for mortgage money ought to be at least as strong in 1955 as this year, and possibly somewhat stronger.

4. *Business demand for long-term money.* This demand for money may possibly be somewhat less in 1955 than in 1954. Capital outlays seem destined to be somewhat lower for important lines of industry. Moreover, funds internally available representing depreciation charges are growing rapidly, a growth which is bound to continue in the future. By 1957, according to a *Business Week* estimate, depreciation charges will be running almost one-third above current levels.[1]

The minus elements in the picture should not, of course, be exaggerated. In general, industrial lines which will show the sharpest cutbacks in capital expenditures have not in any case been heavy borrowers. Manufacturing firms, as the table shows, have accounted for somewhat more than a quarter of all new corporate securities offered thus far in 1954. Public utilities, whose capital outlay programs will be better maintained in 1955, have been among the important borrowers. So far this year they have accounted for over half of all new corporate securities offered. The companies, in short, that will maintain their capital expenditure programs are also the ones accounting for the bulk of long-term financing. Nevertheless, it seems clear that corporate demand for long-term money will be no greater than in 1954, and will probably be somewhat less.

NEW CORPORATE SECURITIES OFFERED FOR CASH
(Dollar Amounts in Millions)

Industry	Amount 1951	%Total 1951	Amount 1952	%Total 1952	Amount 1953	%Total 1953	Amount 1954*	%Total 1954*
Manufacturing	$2,969	43.3%	$4,039	42.4%	$2,254	25.3%	$1,491	28.0%
Public Utilities	3,348	48.8	4,366	45.7	4,505	50.8	2,994	56.0
All other	549	8.0	1,129	11.9	2,139	24.0	859	16.0
Total	6,866	100.0	9,534	100.0	8,898	100.0	5,344	100.0

Source: S.E.C. Statistical Bulletin, September 1954, p. 3.
* First seven months.

5. *Public demand for credit.* Public demand for credit in 1955 should exceed 1954. State and municipal demand for funds, in line with the trend of the last several years, should continue to rise. There seems to be no immediate end to the pressing needs for those projects which require borrowing—highways, toll

[1] *Business Week,* October 9, 1954, p. 43.

roads, schools, and urban facilities generally. Moreover in relationship either to their tax receipts or to national income generally state and local indebtedness is quite low. And the privileged tax sanctuary status accorded to these obligations merely augments their ready marketability. Clearly this combination of needed projects plus further substantial debt elasticity should make 1955 a record year for the flotation of these municipal obligations.

Where then do we come out in this rather detailed appraisal of the supply and demand forces which will be operating in the money and capital markets next year? The best guess seems to be that the supply of new money will be about the same as in 1954, though this will be a somewhat smaller proportion of national income. On balance the total private and public demands for accommodation should be up slightly over 1954. This would suggest a moderate further stiffening of rates upward, with again the major response to these market forces being concentrated in the short-term end of the rate curve.

How all of this works out, however, depends not only on market forces as such but also on the nature of probable Federal Reserve and Treasury actions in the monetary and credit policy field.

STATE AND LOCAL PUBLIC DEBT IN RELATION TO RECEIPTS AND NATIONAL INCOME
(Dollar amounts in Billions)

Year	Debt	State and Local Receipts	National Income	Debt as percentage of: Receipts	Debt as percentage of: National Income
1929	$13.2	$ 7.6	$ 87.8	173.5%	15.1%
1940	16.5	10.0	81.6	165.0	20.2
1946	13.6	13.2	179.6	103.0	7.6
1950	20.7	21.5	240.0	96.4	8.6
1953	28.6	27.0 p.	305.0	106.0	9.4

Source: U. S. Department of Commerce.
p. preliminary

Monetary and Credit Policy

1. *Treasury policy.* The Treasury comes into the picture for two important reasons. First, it will be faced with a small cash deficit, with most of this concentrated in the latter part of the calendar year. Second, the Treasury faces substantial refunding operations. Apart from the roughly $40 billion of U. S. Treasury bills and certificates of indebtedness outstanding, $12.3 billion of notes mature in 1955 and $2.6 billion of bonds maturing in 1960 become callable in March.

What kind of securities will the Treasury offer to cover its requirements for new money and for refunding? That, of course, is the policy question of concern to us here.

It is understandable that we do not yet have as much agreement on what debt management policy ought to do for the nation's economy as we do about fiscal policy. Unlike fiscal policy, which has been at the focus of thinking for two decades, debt management policy has received really serious attention only since about 1950.

What we seem to be moving to is this. Debt management operations can in a boom pre-empt funds which would otherwise be privately borrowed and spent, thereby withdrawing money from the stream of spending. And a debt operation which might be inconsequential relative to a $275 billion debt may withdraw enough funds to exercise real restraint. (Thus I would regard the issue of 3 ¼'s in April 1953 a success, even if the maturity center of gravity of the debt was little changed.) Debt management can, therefore, be complementary to tax policy (whose job is to withdraw funds from the spending stream in a boom) and credit policy (whose task is to limit the creation of new money).

Moreover, it seems clear to me that these

operations in reverse can contribute to moderating a downswing in business activity. But that point has already been touched on earlier in this paper.

The maturity of the debt is not so out of balance toward the short end now as to threaten the economy with excess liquidity (though it was a few years ago). Next year looks like the kind of situation which would be appropriate for a new long-term issue.

A continuation of the policy of funding into intermediate maturities does suggest itself as a useful compromise. This lessens the problem of the debt's piling up at the short end. Intermediate issues, however, would not pre-empt funds which otherwise might go to private borrowers.

2. *Federal Reserve policy.* Discussions about Federal Reserve policy have taken a curious turn. After its servility to the Treasury during much of the postwar period, the Fed has reasserted itself and seems to have gained a belief that monetary and credit policy have something to do with the real world.

In its September 23, 1953, directive to the executive committee, the Federal Open Market Committee stated that open market policy should be one of "active ease."[2] This policy has, of course, continued through 1954. The money supply has continued to expand according "to the needs of a growing economy."[3] Reserve requirements were progressively reduced. Excess reserves throughout the year have averaged about $800 billion and net free reserves have been only slightly less as discounts fell to nominal levels.

The good results of this have been little short of startling and not, I think, entirely accidental.

The character of needed over-all Federal Reserve policy seems quite clear. Improving but not inflationary business conditions would clearly call for a continued easy policy with any firming up of rates arising out of market forces and not deliberate Federal Reserve action. We can, in short, expect Federal Reserve policy generally to metamorphose from "active ease" to "ease".

Summary

It may be useful now to summarize these observations about the monetary and credit outlook for 1955.

1. Events in recent months clearly demonstrate that monetary and credit policy do make a difference in business conditions, even on the downswing.

2. There seems to be no large change in the flow of savings in prospect for 1955.

3. The private demand for funds ought to be somewhat greater than in 1954, with most of the increase being for short-term credit.

4. Public demand for funds should be somewhat larger next year than in 1954. Next year ought to be a good time for some new long-term Treasury financing, as well as continued periodic intermediate issues. The need for such refunding is not urgent now, however, since there is no surplus liquidity generally.

5. Federal Reserve policy should continue to be "easy" to facilitate the expansion in business conditions.

[2] *Annual Report of the Board of Governors of the Federal Reserve System*, 1953, p. 27.

[3] *Federal Reserve Bulletin*, July 1953, p. 695.

An examination of imports, exports, convertibility of currencies, foreign aid, foreign investment, and international economic policy.

The International Economic Outlook

C. F. Remer

THIS is a guess, or a series of related guesses, as to what is likely to happen in the foreign trade and international economic relations of the United States over the next year or so. It is undertaken without making any assumptions concerning political developments, strategic moves or action in the so-called cold war.

Imports

The first step toward estimating the international economic outlook for the United States is a guess at merchandise imports in the near future. Imports are an item in the balance of payments; this suggests certain limits but we do not import just to make the books balance or there would be less talk of a dollar shortage. Merchandise imports are a factor which has some degree of independence and calls for separate examination.

The current situation, the situation over the past five years, is that the level of merchandise imports into the United States, measured in dollars or by quantum, has declined from the higher level of the first half of 1951 and has remained fairly stable over the past three years. Imports were above $3 billion during the second quarter of 1951; they have not been as high as $3 billion during any quarter since, nor have they been below 2½ billion. What is more, import prices have been remarkably steady over the past three years after a decline from the higher prices of 1950 and 1951. This is the background of the estimate to be made.

Imports during the first half of 1954 are known. They were at the rate of $10.5 billion for the whole year, which may be compared with $10.9 billion for 1953 and $10.8 billion for 1952. The stability of prices was maintained during the first half of 1954 and has continued beyond the middle of the year.

Consider certain details. This level of crude food imports was maintained during the first half of 1954 by the high prices of coffee and cocoa. These prices are now lower and coffee prices are expected to remain lower over the next year, though an American official recently got into trouble for saying so.

Raw material imports dropped somewhat during the first half of 1954 but prices remained fairly steady. A greater recline in prices was prevented by rising industrial activity in western Europe which is expected to continue. In the case of wool we are told that purchases by other countries drove prices up so far that the United States used more of its own stocks and imported less.

Imports of finished manufactures have not fallen off and have included such new commodities as automobiles, sewing machines, tractors, electrical machinery and office equipment. Imports of finished manufactures have

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continued during recent quarters to show a rise in ratio to total imports which has persisted since shortly after World War II. A fall in this ratio was a feature of American imports throughout the period from the Civil War to recent years.

Factual details of this sort support the guess that merchandise imports into the United States will continue through 1954 at about the 1953 level and that this level will be maintained in 1955.

Exports

The second step toward an estimation of the economic outlook for the United States over the coming year is a guess as to the level of merchandise exports. The greater complexity of this item is brought out by the declining ratio, in recent years, of merchandising exports to that which is reported in the balance of payments of the United States as "Exports of goods and Services, total." Before World War I this total exceeded merchandise exports each year by no more than a few million dollars. During the interwar years the difference was about $1 billion. At the end of World War II it was $3 billion; by 1953 it was nearly $9 billion; during 1954 it has been at the rate of about $8 billion.

This difference is, in part, explained by income on investments, that is by the service of capital, but in the main it means that many items enter into the determination of total exports: military aid, government grants, government loans and private investment.

The current situation, that is the situation over the past few years, is for merchandise exports much as it was found to be in the case of merchandise imports. Merchandise exports dropped to a lower level during the second half of 1952 and have maintained that lower level fairly steadily over the past two years. The decline came later than in the case of imports. The fluctuations from quarter to quarter have been a little greater. Prices, however, have been more stable for exports than for imports. Stability at a lower level than that of 1951 and 1952 is the outstanding feature.

Export Situation in 1954

Merchandise exports for the first half of 1954 may be reviewed in greater detail. The sustained export of raw materials from the United States reflects the rise in industrial activity abroad. According to a recent report, industrial production in Western Europe increased by about 8 per cent in 1953–4 over the preceding year. Industrial production in the United Kingdom, 1948 as 100 stood at 114 in 1952, at 121 in 1953 and was above the 1953 figure during the first six months of 1954 (it was lower in July and August). We continued to export our raw materials because we did not export our recession.

An increase in exports during the second quarter of 1954 was, in part, due to the sale of agricultural surpluses for foreign currencies. This accounted for $100 million during the first half of 1954 and negotiations for further sales to the equivalent of $384 million have recently been reported in the press.

The maintenance of the export of non-agricultural goods of all sorts has been related—by the Department of Commerce—to the elimination of exchange restrictions abroad, to increased sales by Latin-American countries to Europe as well as to the United States and to the ability of American manufacturers to meet competition. The United Kingdom, Germany, *and* the United States increased their exports to the sterling area during the second quarter of 1954.

During the same period exports to Canada declined. Canadian consumers are reported to have continued to purchase, but inventories were allowed to fall off.

This sort of review of the situation by country and by commodity makes it reasonable to estimate that merchandise exports from the United States may be slightly higher in 1954 than in 1953 when the figure was $12.4 billion. Merchandise exports may be slightly greater in 1955 than in 1954, but there is no reason brought out by the examination of commodity and area to look for any notable change.

Convertibility of Currencies

A double guess is required under the heading of convertibility: one, which touches reserves abroad; and a second, on the prospects for the actual adoption of wider exchangability among the world's currencies.

The gold and foreign exchange holdings of the countries outside the United States which were stable over the three years 1950, '51, and '52 increased from $23.3 billion in 1952 to $25.7 in 1953 and this increase has continued during the first half of 1954. They were reported at no less than $27.2 billion at the end of June.

There were, however, some disquieting factors in the situation during the second quarter of 1954. The balance due the United States was met by short-term credits made available from private and government sources in the United States. There was practically no sale of gold, and foreign currencies were accepted for agricultural surpluses.

While it is not to be expected that reserves held by other countries will continue to increase as rapidly as in the recent past, two observations may be made. The first is the obvious one that other countries are in, and will continue to be in, a better position to acquire reserves than in the past, and the second that reserves in general are probably not adequate to meet the needs of these countries for international liquidity. The long-run prospect is that greater reserves will be built up.

Convertibility was not advanced, as had been expected earlier, by any announcement at the annual meeting of the Fund in September. The expectation seemed to be soundly based. Inflation was no longer a serious obstacle, restrictions and controls over trade had declined, regional arrangements as in the Sterling area and the European payments union had run into no new difficulties.

During the Washington meetings in September the generally accepted reason for British coldness toward convertibility was the domestic political situation in the United Kingdom. This probably was the immediate reason. A longer run explanation is that some convertibility is the enemy of more convertibility.

A long-run factor of great importance was only occasionally referred to at the meetings of the Fund and the Bank. This is the uncertainty of continuity in the foreign economic policy of the United States. Sir Arthur Fadden of Australia is one of the few who spoke his mind plainly. "We have never doubted," Sir Arthur said, "that the President's head and heart were in the right place. But as practical men, responsible to our own people for their welfare, we are obliged to focus not upon words and hopes but on capacity and deeds." The British attitude had already been stated by Mr. R. A. B. Butler in negotiations with the Americans.

A liberal and especially a stable American policy is a condition of convertibility and of other desirable developments. But Mr. Butler was unwilling to move, and it seems certain that a real widening of convertibility is now postponed not for a month or two but for a full year.

Foreign Aid

The United States government during the year 1953 provided other governments with military supplies and related services to the value of about $4.3 billion. The amount of such aid during the first half of 1954 was nearly $2 billion. Appropriations for the fiscal year 1954–55 indicate no decline during the coming year. There is also the possibility of new aid to Germany.

Military aid may for all practical purposes be regarded as *deliveries in kind*. It does not directly affect the demand for or the supply of dollars abroad and tends to be disregarded in international economic discussions, but it is plain that it constitutes the economic aspect of foreign policies of great importance. If expenditures for defense by the governments of the free nations continue to mount, the question of the just distribution of the burdens among these nations may come into the open.

During the year 1953 the United States

government undertook military expenditures abroad in its own account to the amount of $2.5 billion and expended about $1 billion more for purposes associated with defense. These and the expenditures for economic aid did make dollars available abroad and they help to explain, in the balance of payments sense, the increased holdings of gold and foreign exchange reserves. Expenditures of this sort may be somewhat smaller but the decline will not be significant.

There is finally economic aid and technical assistance. This accounted for about $400 million and so far as current appropriations are concerned will be at about the same level over the year ending in June 1955. There is more to be said, however. At the recent meeting of Colombo Plan countries in Ottawa, Japan and the Philippines became members of the Colombo Plan group. The United States is reported to have offered a sum of $700 million to promote economic development under this plan. This is no doubt an effort to employ economic means to support a solidarity in South East Asia which was not broadly enough assured by the Manila Pact.

Other plans for greatly increased economic aid on the part of the United States have been reported. The guess is reasonable and there may be increased expenditure before the end of 1955. Economic analysis leads to the conclusion that capacity to receive funds and put them to effective use will keep the sums moderate.

Foreign Investment

Long-term private foreign investment over the coming year is expected to play a modest but significant part in the international economic outlook.

Direct—or entrepreneur—investment has been, since World War II, the chief form of private investment. It has, in fact, been the chief form since the loans of 1924–28 when, according to one critic, the Americans demonstrated that they were better salesmen than bankers. In recent years American direct investment abroad has shown a steady growth. Outpayment was $722 million in 1953 and there was reinvestment of earnings to about an equal amount. Total holdings abroad were about $16 billion at the end of 1953.

This growth will, no doubt, continue. Outpayments of $357 million have been reported for the first half of 1954. Nearly two thirds of this went to Canada where American-owned investment trusts are a new feature. The importance of petroleum and manufacturing in American direct investments is well known.

Portfolio investments have occasioned small outpayments in recent years, about $200 million a year. The total of such holdings was about $6.6 billion at the end of 1953 and it may reach $7.0 billion by the end of 1955. Outpayment on portfolio investments has varied greatly from year to year and the variations have been greater in recent years.

It is to be observed also that portfolio investments in the United States by other countries are relatively large and are growing. A recent estimate puts the total at $3.7 billion, with nearly one billion in the hands of the Swiss alone. These holdings are, in part, really short term holdings, a second line of reserves. They play a small part in international payments at the present time but it is possible that another decade will see Great Britain and Western Europe holders of American securities on a large scale.

Private foreign investment by the United States over the next year may be expected to bring outpayments of about $1 billion. When this is compared with government outpayments and transfers which may run to $8 billion or more, the modest short-run importance of private investment is clear.

The smallness of American private foreign investment seems inconsistent with the importance which Americans attach to private enterprise. It has been the subject of government investigation and report, of private conference, of research and of editorial comment. Foreign investment has been dealt with in special treatises and certain guarantees have been offered by the U. S. government.

The most recent proposal for action is in

the President's budget message of last January which proposed tax relief for foreign investors. The President endorsed the Randall Commission's recommendation of a lower tax by "14 percentage points" than the regular corporate rates on income earned abroad. No action was taken and I am told that tax relief faces formidable difficulties. Current proposals are largely confined to direct investment. Portfolio investment has been given little attention.

There are many reasons for the present smallness of American foreign investment and no general exposition can be attempted here. One reason may be that the form of such investment is not adapted to the conditions of the time. Direct investment carries the business man abroad or carries his control with it. When such investment goes beyond Canada it encounters difficulties which are well known. Portfolio investment, the product of nineteenth century investment banking, requires an immediately salable security with a fixed rate of return which is to be paid in advance of any effect worked by the investment. It is poorly adapted to balance of payments difficulties.

American interest in economic development and American concern for private enterprise ought to suggest to investment bankers and business men a more effective form of international investment than has been worked out in the past.

International Economic Policy

It may be taken for granted that no new report or set of recommendations on foreign economic policy will come into existence during the next year. A guess must, therefore, be made as to the action which will be taken on the recommendations of the Randall Commission. The guess is that the government of the United States will mark time. There will not be enough action to give assurance either to others or to ourselves.

One reason for this is the domestic political situation in the United States. A second is the separateness of the groups who favor a liberal policy. The most powerful advocates of freer trade are business men and industrialists, the most vocal are the internationalists and the intellectuals. These groups tend to distrust each other rather than to work together. A third is that the fear of unemployment will play an important part in the action of political leaders during the next year.

The final point may be made that the Randall Commission Report is not a document which has unity, vigor, and persuasive power. The recommendations on the General Agreement on Trade and Tariffs are unrealistic. The limitations on tariff bargaining power would, if enacted into law, greatly impair that power. The report was weakened by the dissent of important congressional members of the Commission. In short, it is difficult to believe that the Report of the Randall Commission will be a strong influence for action over the coming year.

Summary of Economic Factors

The estimates of the preceding sections may be reviewed. Imports into the United States in 1955 will be maintained at about their present level. Exports may be somewhat greater but the increase will be small. The outpayments from the United States for reasons related to defense will be maintained and will enable the reserves of other countries to continue to be built up at a moderate rate. Convertibility will be delayed for at least another year. Private foreign investment will continue to play a relatively modest role. Foreign economic policy will not introduce any new factor of importance. There is the possibility of an increase in the provision of funds for foreign economic development but no vigorous measures have been definitely proposed. Trade, aid and payments will not present serious difficulties. In short, the international economic outlook is that the United States will mark time.

A substantial change in the international *political* situation might alter some or all of these conditions.

A comprehensive system of equations suggests that 1955 will not be very different from 1954.

A Statistical Model for 1955

Daniel B. Suits and Arthur S. Goldberger

A STATISTICAL model is frequently referred to as a *structural* model of the economy. In its completed form, a structural statistical model is a system of mathematical equations each of which describes either a behavioral or a definitional relationship among a number of important economic variables.

There are three distinct kinds of variables involved in the system: (1) Dependent variables, (2) Independent predetermined variables, and (3) Independent exogenous variables.

The *dependent* variables are the magnitudes which the model is designed to forecast. They are so-called because the level of each depends upon the levels of the others and upon the *independent* variables. In the Research Seminar model of the U. S. economy, the Gross National Product and its components, the level of average hourly earnings, the price level, and the level of employment are typical dependent variables.

The Independent Variables

The independent variables are those whose magnitudes cannot be estimated from the model but which must be specified independently before the dependent variables can be forecast.

There are two kinds of independent variables. The first of these are the *predetermined* or *historical* variables. These are magnitudes already historically fixed for periods preceding the year to be forecast. Profits of the previous year, capital stock and liquid assets at the end of the previous year, and last year's consumption are typical predetermined variables in the Research Seminar Model.

The second class of independent variables are the *exogenous* variables. These are variables which are not accomplished facts when the forecast is made, but whose future behavior while contributing to the determination of the level of economic activity is not in turn determined by it. Frequently a large political element enters into the determination of the magnitudes of exogenous variables. A typical exogenous variable, for example, is government expenditure for goods and services.

The exogenous variables constitute the big "ifs" in the forecasting process. No matter how accurately the statistical model may describe economic behavior, it cannot predict magnitudes which will in large part be politically determined. The best it can do for us is to forecast the implications of any given policy for the economic performance of the rest of the economy.

The Michigan Research Seminar Model

With this background in mind we now turn to a brief examination of the statistical model of the U. S. economy devised in the University of Michigan Research Seminar in Quantitative Economics. This model was fitted statistically to data of the U. S. economy covering the period 1929–1952, the years 1942–46 being omitted. The project was conceived by Dr. Lawrence R. Klein, research associate

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with the Seminar, and carried out under his joint supervision with Arthur Goldberger.

The completed model consists of a system of twenty-five equations involving twenty-five dependent variables and a large number of exogenous and predetermined variables.

Of these twenty-five equations, fifteen are structural equations actually fitted to economic data. Five are merely definitions of one variable in terms of another, (e.g., the Gross National Product is equal to the sum of its parts).

The remaining five equations are simplified representations of tax laws. Since tax laws change frequently, there are special problems in fitting them. Moreover we often want to examine the effects produced by prospective modifications in tax legislation with which we have had no experience. For these reasons taxes are included in the system by using a simple approximation derived from recent experience and from the tax law itself. If we like, tax laws can be thought of as a kind of exogenous variable in the form of an equation rather than a magnitude. It is to be emphasized, however, that tax yields are dependent variables whose behavior depends not only upon legislation but also on the magnitudes of such other dependent variables as, for example, income.

The completed system is in a form to yield quantitative statements about the economic behavior to be expected from large sectors of the economy, and when taken as a whole forecasts what we should expect to follow from any given set of exogenous events.

The Process of Forecasting

The process of forecasting proceeds as follows. Assumptions about the exogenous variables—the level of government expenditure on goods and services, the number of government employees, etc.—are formulated and translated into magnitudes which will fit into the model. All expenditure figures are entered in billions of 1939 dollars, numbers of persons are entered in millions, while prices and wages are included as index numbers.

Next the values of all predetermined variables are looked up or—as is often necessary due to the timing of the forecast—estimated from available information for the current year. These are likewise translated into proper form. The independent variables thus specified become the "givens" in the system of twenty-five equations, the dependent variables constituting the "unknowns". The system of equations is then solved for the unknowns to yield the forecast for the coming year.

Thus described, the process of forecasting appears, aside from such judgment as is used in specifying the exogenous variables, as a completely automatic mathematical procedure. In the absence of any other evidence it would be, but where independent evidence is available on the behavior to be expected of given variables during the coming year it is possible to modify the procedure of forecasting to take advantage of this knowledge.

Suppose, for example, that an independent survey of investment plans is at hand indicating a rise in investment, and that in recent years, our model has persistently underestimated investment. It is a simple matter to make a compensatory modification in the investment equation.

Likewise, we can frequently adjust other equations where independent evidence leads us to believe that the unadjusted equation will give poor results. As a matter of fact, one of the greatest advantages in forecasting from a structural model of the economy is precisely that it makes such modifications possible, and enables fresh information to be inserted with a minimum of alteration of the basic model.

Preparation of the Forecasts for 1955

The revisions of Department of Commerce data provided a special complication in the preparation of forecast levels for 1955. The model had been fitted to the best data available at the time it was constructed, including, of course, Commerce data on the old basis. In order to produce forecasts comparable with the new series the model must ultimately be refitted to the revised data. This has not yet

been done and in the meantime we can only adjust the model "by hand" so to speak, to compensate for the effects of data revision. This was done by substituting the revised data for the last five years into each of the structural equations in turn, and calculating the difference between the calculated and actual values of the variable. If these differences showed a substantial and persistent bias the equation was adjusted to compensate for it.

This means, of course, that our forecasts for 1955 are somewhat makeshift; however, only four equations were found to require adjustment. Downward adjustments were made in the consumption equation and in the equation determining agricultural income. The fourth change was a downward adjustment of the investment equation to compensate for what appears to be a trend toward overestimation.

Whether the latter adjustment should properly be made is open to question. We have therefore prepared an auxiliary forecast ("A*" in the table) using the unadjusted investment equation.[1]

The Different Assumptions

In order to explore a reasonable range of plausible alternatives for the exogenous variables, forecasts were prepared for three different sets of assumptions. Broadly speaking they are as follows:

Assumption A

1. Federal government expenditure on goods and services for fiscal 1956 will be $4 billion current dollars below the level of fiscal 1955. This means a cut of $1.8 for calendar 1955 below the level of calendar 1954.

2. State and local expenditure will continue to increase at the trend rate of $2 billion per year.

3. The corporate profits tax cut will go into effect as scheduled on April 1, 1955.

4. The personal income tax will go into effect as now scheduled, but with an additional cut of 10 per cent in the effective tax rate, effective July 1, 1955.

Assumption B

1. Federal current dollar expenditures for goods and services will continue at the 1954 calendar rate.

2. Same as A.

3. Same as A.

4. Personal income tax rates will go into effect as now scheduled.

Assumption C

1. Federal *real* (as opposed to current dollar) expenditures will continue at the 1954 calendar rate.

2, 3, and 4. Same as A.

The Economic Outlook for 1955

The levels forecast for the year 1955 under the alternative assumptions are listed in the accompanying table. In summary, the outlook is for a year much like 1954.

Under assumption A the forecast level of Gross National Product of $354.9 billion 1954 dollars is slightly under the preliminary estimate for 1954, with small increases in real consumption and investment expenditure offset by the prospective reduction in government expenditure and a slight decline in the foreign balance on current account.

The forecast real wage bill of $202.1 billion represents about a two per cent decline from the 1954 level, primarily growing out of prospective changes in government employment. No change is forecast for real farm incomes for 1955, while a rise is predicted in the real level of other non-wage incomes, primarily associated with the increase forecast for the level of corporate profits.

The outlook for prices is for further increases, but our experience has shown that *price prediction* is not the forte of this model, and the indicated level should not be taken seriously.

A continuation of the mild upward movement of wage rates is forecast despite some

[1] Based on a more optimistic forecast of capital formation, Assumption A* leads to a forecast level of GNP slightly above that of 1954. Both forecasts are within one per cent above or below the 1954 level.

fall in the general level of employment and increasing unemployment.

With regard to the estimates of these latter magnitudes it should be understood that the unemployment figure is the difference between forecast employment and the "employee labor force."[2] These figures correspond to those of the U. S. Department of Commerce's National Income Division, and are not directly comparable with the usual (Census Bureau) estimates of employment and unemployment.

Also, the employment forecast is based upon a specified level of average weekly hours. Any alteration in the hours assumption will result in corresponding modification of the levels of employment and unemployment.

Effects of the Three Assumptions

The effect on the economic outlook of the varying basic assumptions can be seen by comparing the three forecast columns, A, B, and C, of the table. There is no substantial difference in the outlook determined by A and that by B. This arises from the fact that assumption A supposes a legislative "package" in which a reduction in tax rates is coupled with a reduction in expenditure, while B supposes neither expenditure nor taxes to be lowered. The two factors are offsetting, causing little net difference in the outlook.

Assumption C, embodying the possibility of a maintained level of real governmental expenditure in the face of tax reductions and some upward pressure on wages and prices, is slightly expansionary as compared with the others.

Although the forecast figures are stated in the table as precise numbers they are obviously subject to error from a variety of sources. While we have not calculated the probable limits to the errors in our forecast, it should be amply clear that we cannot pretend to a level of precision as fine as the changes forecast here. The forecast levels are quite compatible with a general outlook somewhat better than that indicated or with one somewhat worse. In other words, within the range of assumptions which we have explored, we may conclude that whichever way the economy may move in 1955, the changes from 1954 will not be large.

[2] The "employee labor force" is equal to the total labor force less the number of farmers and the number of non-farm entrepreneurs.

LEVELS OF ECONOMIC ACTIVITY FORECAST FOR 1955
(Figures in billions of 1954 dollars unless otherwise noted)[1]

	Forecast 1955 under assumption:				Preliminary estimate
	A	A*	B	C	1954
Gross National Product	354.9	359.1	356.2	361.1	356.0
Consumer Expenditures	234.9	235.3	234.7	235.5	232.9
Gross Private Capital Formation	49.3	55.0	49.3	49.3	45.5
Government Expenditure on Goods and Services	69.9	68.9	71.4	74.9	74.9
Exports	15.9	15.7	15.9	15.5	17.4
Private Imports	14.4	14.7	14.7	14.7	14.7
Employee Compensation	202.1	202.9	203.9	202.9	206.8
Farm Income	12.2	12.4	12.2	12.2	12.2
Non-wage Non-farm Income	72.3	74.8	72.5	76.6	68.3
Corporate Profits	33.4	35.0	33.6	36.1	27.4
Index of Average Hourly Earnings (1939=122.1)	373.1	373.4	373.7	374.6	356.1
Index of General Price Level (1954=100)	106.9	108.5	107.1	109.6	100.0
Employment[a]	56.5	57.4	56.9	58.4[b]	56.8
Unemployment[a]	1.9	1.2	1.5	—0.4[b]	1.0

[1] The 1955 forecasts were obtained from the model in 1939 dollars. The figures presented here were obtained by adjustments which were only approximate; hence, there is a slight discrepancy between GNP and the sum of its components.
* Auxiliary forecast, unadjusted investment equation.
[a] Millions of full-time and part-time employees.
[b] Assumed level of average weekly hours too low to be compatible with assumption C. The only result of assuming a higher level of hours would be to forecast a lower level of employment.

Several forecasting methods suggest that 1955 will be somewhat better than 1954, with governmental policies in that and other future years playing an important role.

The Economic Outlook for 1955

Gerhard Colm

THE purpose of this paper is to present a summary of the various papers and the discussion of these two days. With respect to the economic outlook for the next year the discussion could very easily be summarized in the following sentence: The current upswing is expected to carry over into the next year which should give us a level of activity somewhat above that of the year 1954.

More interesting than this result were the different methods used by the various speakers in their analysis of the business outlook. Most business economists will be more interested in an appraisal of these methods than in a summary of the result, because they are themselves in the business of forecasting. This conference is an exhibition of tools in a "do it yourself" show.

In my summary I will present, first, a critical appraisal of the various methods which have been used, and second, a comment on the business outlook as it has been presented here by various speakers.

Various Methods of Business Analysis

1. *The Symptomatological (or barometer) Approach.*

A few decades ago, the symptomatological or barometer method of business analysis was virtually the only method available to the economist. To understand this we must remember the period when this approach originated.

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First, it was a time when it was taken for granted that the economy's ups and downs were pretty regular. It was expected that the economic indicators which in the past regularly anteceded an upturn or downturn would do so also in the future. Therefore, the only task was to study many hundreds of time series of the past and select those indicators which usually changed in advance of an upturn or downturn.

Second, this approach originated at a time when business cycles were regarded as a quasi-natural phenomenon. The government was not regarded as having either the responsibility or the ability to counteract the cycle. Government policy was designed to provide some relief for victims of the cycle but not to combat the cycle itself.

Third, this approach originated at a time when very few really up-to-date statistics were available. National income and similar aggregative estimates became available at best only many years after the event. Therefore, any current analysis had to be based on symptoms rather than on global estimates.

Today, all these conditions have changed and other methods of analysis have been developed. Therefore, the use of economic indicators today is only one of several methods of business cycle analysis. The fact that other methods have been developed does not mean that the symptomatological approach has become useless. The approach remains useful for short-range analysis, particularly as a means of forecasting the turning points in the cycle. In this respect the diffusion in-

dex which was presented by Mr. Moore is extremely promising. However, the indicator approach must be supplemented by other methods.

2. *Analysis of Expectations and Intentions.*

Economic forecasting is safest to the extent that it can be based on decisions which have already been made. Decisions on government spending and tax policy must always be made quite some time before these expenditures or revenues become facts. Therefore, studies of what is in store in the government sector of the economy as, for instance, provided in Mr. Musgrave's survey, are among the most important building blocks for constructing an economic forecast.

The same is true with respect to the intentions of business to invest in plant and equipment. These plans, too, must be prepared some time in advance and to that extent surveys of investment intentions are an important factor for forecasting. Also, the surveys of business expectations with respect to their own sales, profits, prices, etc., as they are compiled by a number of organizations, particularly by Dun & Bradstreet, Inc., are of great importance. Finally, the surveys of consumer attitudes and intentions have become indispensable instruments of business analysis and forecasting.

With respect to these surveys of expectations and intentions we have to consider the likelihood that present expectations and intentions may be changed. Government programs and business plans for investment in plant and equipment are somewhat less susceptible to sudden change than business expectations, for instance, concerning inventories or consumer intentions to buy. Surveys of expectations give us, as Mr. Katona pointed out, really no direct statement about the future but only a statement about present sentiment. However, present sentiment has something to do with the way in which people respond to future events and to that extent have a predictive value. Analyses of government budgets, and that includes Federal, state, and local governments, and analyses of business and consumer intentions, belong among the most important contributions that have been made to obtaining a more realistic grasp of the way in which the economy works.

3. *Construction of Economic Models and Projections.*

A method of business analysis, developed only during the last 10 or 15 years, consists in what has been called "economic projections" or construction of "economic models." In this respect we may distinguish between mathematical and non-mathematical methods. These projections are of particular value at a time of rapid change, either in political or economic facts. They are most useful when we want to speculate about economic consequences, for instance of an increase or reduction in defense expenditures, or in business investment in plant and equipment, or of a substantial change in technology. The symptomatological or barometer approach largely operates under the implicit assumptions of "ceteris paribus". The model or projection approach operates explicitly under the assumption of *changes*. In a way, a model is nothing else than an attempt to put various assumed changes into an internally consistent picture of the economy. Therefore, this approach is most appropriate at a time when stability and regularity are overshadowed by expected changes.

This approach is also very suitable for an appraisal of the likely effects of government policies which may be contemplated for the purpose of promoting balanced economic expansion. Personally, I think that the value of these tools for an appraisal or alternative policies is more important than their value as a tool for prediction.

My main reason for being skeptical about the model as a forecasting device is this. For a mathematical forecast we must assume that the economic response to exogenous changes in the model can be predicted on the basis of probability. We know, however, that government, business, and (to some extent) con-

sumers respond to certain changes, for instance to an inflationary rise or to a deflationary contraction, in a manner which is influenced by their experiences with previous similar developments. The model cannot tell us what measures the government will adopt or whether business managers will change their investment plans in response to a business decline. *Past experience may be a very misleading guide because government and business may have learned from past experience and changed their responses.* Therefore, there is no clear probability conclusion from past responses to responses to similar changes in the future.

This is what we may call the "uncertainty principle" in economic analysis. We may explore the significance of changes in such responses by making alternative projections assuming different government policies and different responses by business and consumers. This may give us an insight into the range of possibilities but will not give us a clear-cut prediction.

The distinctions among these various methods has been made in order to clarify the various possible approaches. In reality the distinction is not quite as sharp as the preceding discussion suggests. Thus, we saw in Mr. Moore's presentation that he has used surveys of intentions and expectations for one of his diffusion indices.

Also, the model builders obviously use past indicators and ratios of the past for building their models for the future. Furthermore, expected changes in the budget and expected changes in business intentions are treated as exogenous factors in building up the models. The model-builders could not work if they had not studied past relationships, and if they did not have the surveys of intentions.

Finally, there is no sharp distinction between the mathematical and non-mathematical models. As Mr. Suits said, he has modified his formulae on the basis of experience and expectation. His approach is one of rigorous mathematics mitigated by common sense. In turn, those who are making non-mathematical projections, which have been called here the "rough and ready projections", are using mathematical ratios of the past in their construction. All model building is based on the assumption that even in a period of rapid change certain ratios remain constant or, at least, change less than the absolute magnitudes.

Thus, listening to the presentation of the different methods of business analysis leaves me with the conclusion that the various approaches must supplement each other in order to give us the most meaningful result.

Comments on the Economic Outlook for 1955

There was in this conference a great deal of agreement with respect to the economic outlook. In this part of my summary I want to underline some of the agreement and some of the differences in emphasis and want to add some comments of my own on these issues.

1. *The Character of the Recent Recession.*

Several speakers commented on the fact that the recent recession has been characterized as an inventory recession. It was said that to some extent the inventory fluctuation was a link in the chain of economic events rather than the prime cause of the contraction. If this interpretation is correct it should have some significance for an analysis of the future. If a sudden excessive accumulation of inventories was not the prime cause of the recession, then we cannot be so sure that a completion of the inventory adjustment will necessarily mean the end of economic difficulties. This means that we have to search for the prime cause that made inventory appear as excessive and then ask whether adjustments have been or are being made which give us reason to expect that the prime cause has been removed.

2. *No Expectation of a Depression.*

There was general agreement that no depression is in sight. Mr. Upgren went as far

as to say that the problem of the depression will have been licked forever if we continue the policy of keeping an ample money supply. Others seem to imply that we do not need to fear a depression as long as the budget is as large as it is at present but that under other circumstances a depression might still occur.

3. *The Short-term Economic Outlook.*

There also seemed to be agreement that an economic upswing is in sight if it is not already under way. In this respect the indicators presented by Mr. Moore appear most convincing. However, he himself confines his optimism to "the near term economic outlook." I think it is most important for analysts who rely on short-term business indicators to remember that an uplift may mean something entirely different according to whether the longer run undercurrent shows an upward movement, a downward movement, or a sidewise movement. According to one of the alternatives of Mr. Suit's mathematical models we could expect for the year 1955 only an average level of activity approximately the same as we had in 1954. That would mean that after the short-term uplift has spent its force we would have to expect another decline. Over a period of perhaps a year or so we would have to expect a sidewise movement. Before we can accept this as a final prediction for the next year we have to consider the way in which the government might react to such an outlook.

4. *The Intermediate Outlook.*

Looking at the short-run outlook in the perspective of the intermediate outlook, I come to about the following conclusions, considering all the facts and opinions presented at this conference.

1. According to present intentions, expenditures for plant and equipment may be reduced by from $1 to $2 billion from the 1954 to the 1955 level. Expenditures of the Federal government, according to present plans, might be down by about $3 billion. On the other hand, residential construction next year may be a $1 or $2 billion higher than in the current year, the liquidation of inventories may come to an end, and state and local government activities will probably be at least $1 billion higher. Thus we may have expansionary forces somewhat in excess of contracting forces, which should give us a slight increase in consumer disposable income. As we do not expect any drastic change in consumer attitudes towards buying, consumer expenditures may rise about a billion or two.

Thus we reach the conclusion that the total level of activity for the next year may be a few billions above that for the current year, if we are guided by present intentions and expectations. Simply to illustrate the order of magnitude we have in mind, we might say that total production next year might be around $360 billion expressed in present prices, compared with the estimated level of $356 billion for the year 1954. This is only slightly more optimistic than indicated by Mr. Suit's model.

2. It should be recognized that a level of gross national product of $360 billion in present prices during the next year would be substantially below a level of reasonably full employment. We estimate that such a full employment level would amount to about $385 billion in 1955. In other words we would still be about $25 billion below the full employment level. If the labor force and output per manhour continue to increase, and if hours of work do not change substantially, we might expect a rise in unemployment in spite of the fact that there may be some increase in aggregate output.

3. I think it is likely that, when the government recognizes that the increase in total production may not be sufficient to prevent a rise in unemployment, policies will be contemplated for promoting a rise in the level of activity. Such policies might include speeding up certain government programs as, for instance, the road construction program; a further liberalization in housing finance; some further tax reduction; etc.

The original estimate for 1955 was made

on the assumption of present policies and attitudes. However, the development might induce some changes in policies which in turn might give us a result somewhere above the $360 billion level, though in all probability below the full employment level of $385 billion.

Government and Economic Conditions

Thus, in general, I share the moderate optimism expressed by various speakers at this conference, partly because I contemplate the possibility that government policies would be used to promote expansion.

However, the business economist may be well advised to contemplate also the possibility that the government might *not* adopt additional measures promoting expansion. It is entirely possible that responsible government officials may be overly impressed by a temporary upturn just during those months when major policies for the next year are to be formulated, and therefore may not feel the need for measures supporting economic expansion.

I do not claim to be an expert on what the government is likely to do or not to do and how the recent elections may affect government, business, labor, and consumer attitudes. This is the point where the economist is entitled to refer to the "uncertainty principle" which I mentioned before. However, it may be of some use for the business economist to recognize which political and economic developments could modify the economic outlook as it appears according to present policies and attitudes.

In conclusion, the outlook for the immediate future is that an upturn of a bit more than seasonal force will take place. This upturn is of uncertain duration. For the year 1955 as a whole the general direction of the movement may be mainly "sidewise" with the possibility of an improvement if supported by appropriate government policies.

For planning of investment in plant and equipment a longer run outlook is needed. For this purpose I would recommend not using any forecast but rather a full employment projection. It might be the safest guess that over the years our economy will approximate the full employment level with some ups and downs. There are available the instruments of policy for promoting conditions under which our economic system can sustain an approximate full employment level, and there are political forces which will make it most likely that the government will use those instruments. Therefore, in the longer run I would assume that general economic development will approximate the full employment level and I would use that as the basis for investment planning rather than any attempt to forecast the exact movement of the business cycle.

Appropriate policies sustained the national economy in 1953–54, and will be needed for long-run expansion.

Policies for Economic Expansion

Arthur R. Upgren

THE United States now appears to be pulling out of the 1953–54 business recession. Though it was a moderate recession, it deserves our attention so that we may learn how to use economic policies to assure that future economic recessions may also be moderate. We also want to know what steps will assist in economic recovery and growth, and what steps retard that growth. Here again the policies of the past year can be instructive. The policies which were adopted to counter the recent recession were effective, and each has been quantitatively appropriate in "dosage" to the specific problem which it was supposed to solve. Before discussing them, however, there is need to look into the causes of the recession itself.

The causes of the 1953–54 recession are now clear. First, expenditures of the Federal government for national security were reduced by 11 billion dollars after the truce in Korea. Second, there was a decline of about 9 billion dollars in business investment for inventory. (Businessmen who were *accumulating* inventories at the rate of more than 5 billion dollars a year early in 1953 have recently been *liquidating* inventories at a rate of 4 billion dollars a year.) Since part of the inventory liquidation certainly reflects the reduced needs for defense, it seems reasonable to conclude that the key to the recession has been the cutback in military spending.

Fortunately for the economy, there have been some compensating forces at work. A moderate increase in consumer expenditures, a moderate increase in total construction, and a moderate increase in the expenditures of state and local governments partially offset the decline in defense expenditures and in inventory investment. Thus total gross national production fell only by 14 billion dollars instead of by 20 billion dollars.

It is not enough, however, to note that these forces helped cushion the economy against the full effects of the cutback in military spending. More important is the question of WHY these forces were at work. Why, for example, did consumer expenditures increase?

Importance of the Tax Cuts

This increase in consumer expenditures during a recession is very unusual, but the explanation is not hard to find. Consumers had more money to spend because their taxes were cut. The 11 per cent increase in personal taxes levied to help finance the fighting in Korea, expired at the end of 1953.

To be sure, total personal incomes before taxes have declined because of increased unemployment and because of a moderate decrease in hours worked per week. But the decline in personal income taxation has been larger. In fact, it has been large enough to convert a declining personal income *before taxes* to a slightly rising total of personal

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disposable incomes. Purchasing power has increased in every quarter of 1954. Thus the proponents of the theory that recessions are caused by a lack of purchasing power have been confounded by the neatness of a tax adjustment.

Tax reduction played a role, too, in maintaining the rate of business outlays for total construction and new capital facilities. In the case of business, the reduction in taxes due to the abandonment of the Excess Profits Tax has secured remarkable results. In the first half of this year, as the *National City Bank Letter* showed in its August issue, 447 corporations having total sales of more than 40 billion dollars, experienced a decline of approximately 7 per cent in such sales. Because their costs could not be reduced as rapidly, the total amount of their profit after all expenses *except taxes,* fell by 18 per cent. Then the reduction in tax liabilities which came about partly because of the rate structure, but primarily because of the termination of the Excess Profits Tax levy, converted this decline in gross profits into an *increase* in net profits after taxes. This is successful fiscal policy indeed.

These benefits which have flowed from tax reduction were not windfalls but were largely the reward for extraordinary fiscal rectitude. A few figures will illustrate the point. In World War I the federal government covered only 32 per cent of total expenditures by tax revenues. As a result, wholesale prices rose to a level of 247 per cent (1920) of the pre-war (1913) level. In World War II, the Federal government covered 46 per cent of total expenditures by tax revenues. Prices almost doubled from 1945 to 1948 after the pent up forces of inflation were set free. Since the outbreak of the conflict in Korea the government has covered 99 per cent of total expenditures by tax revenues, and inflation has been prevented.

Population growth and high incomes help account for the enlarged expenditures for schools, hospitals, highways and other investments by state and local governments.

Monetary Policies and Actions

In reviewing the factors which have mitigated the recession of 1953–54, we cannot overlook the role played by the monetary authorities. The first conspicuous change in our monetary policy occurred in June of 1953 when the onset of the recession first became visible. In less than six weeks the Federal Reserve authorities increased the amount of banking reserves by almost $2,500,000,000. This was done in part by the extended purchases of government securities. These additional reserves helped bring about easier interest rates and encouraged adequate flows of credit for all legitimate needs.

The second step toward enlargement of the banks available reserves was a reduction in reserve requirements of banks. This step released required reserves into the "excess reserve" category and thus placed the banks in a position to expand loans still more. This action was extended again in 1954 when an additional $1,500,000,000 of bank reserves were similarly further released from the "required" to the "excess" category. (Reserve ratios required of the banks were lowered in July.) Thus we used the expansion of credit to help check recession.

The policies which have helped sustain the economy in the past year and a half include: 1) the tax reductions described, 2) the massive increase in bank reserves brought about by open market purchases and by lowered reserve requirements for the member banks. To these, a third may be added—the new liberal housing bill lowering down payments and lengthening years for re-payment for both new and existing homes.

Despite these policies the economy is now at what might be appropriately termed a dead-center level. For the first three quarters of 1954 production has been on a very level plateau. It is a fact that during the past year the economy did not produce 14 billion dollars of goods which it was competent to produce. Nor did it continue its normal growth. The normal growth factor of perhaps 3 per

cent a year should have brought about an increase of 11 billion dollars in total production. Thus policies are needed to increase the annual rate of production of all goods and services by 25 billion dollars or to a level by the end of 1955 of at least 380 billion dollars.

The question may now be asked: what further policies are needed to stimulate economic growth?

Need for More Tax Reduction

The most effective policy is tax reduction. The personal tax reduction of the past year *sustained* total consumer disposable income despite the dip in total production. As a result, consumer purchases increased throughout the recession. A tax reduction could further enlarge purchasing power to give the needed stimulation for economic recovery.

Thus far, the tax reductions have included generous reductions for business. Consequently corporations have maintained their profits in face of a decline in sales and a larger relative decline in profits after all charges and expenses *except Federal income taxes*. In addition, there have been reductions in excise taxes, some of which have been passed on to consumers. The final form of tax reduction in the Tax Reform Bill liberalized policies on depreciation, taxes on dividends, and so on.

Writing in *Fortune Magazine* three or four years ago, Russell M. Leffingwell made some suggestions for checking the inflation induced by the Korean conflict. He urged the government to abandon any proposed search for the "perfect tax" on the ground that its very perfection would emphasize it out of all proportion to other taxes. This emphasis, he feared, would encourage ingenious means to escape the tax. Then Mr. Leffingwell urged that taxes be increased all across the board,—"a little here, a little there, a little everywhere". That was, in effect, done, and inflation was checked on every price level as early as April 1951. In the case of one price level only, the consumers price index, was there a subsequent rise. The moderate increase was an adjustment to earlier increases in wages and in raw material costs. It has not been the result of any inflationary force pervading the economy since April, 1951.

The lesson to be derived from Mr. Leffingwell's advice, to be used for economic recovery, when it is recovery rather than defense against inflation which is wanted, is that taxes should be lowered. Inasmuch as recent reductions have perhaps somewhat favored business, it would seem appropriate to accede to the view that the personal income tax exemption be increased. The prospect of business recovery in 1955 suggests that corporate earnings will improve next year.

A tax reduction is not necessarily a threat to the budget position because the initial cut in tax rates can be offset by the total increases in taxable income. For example, if the marginal "take" in taxes is 33 per cent of any rise in incomes, a sustained 15 billion dollar rise would come close to recouping a 5 billion dollar tax reduction.

Moreover, tax reduction need not be inflationary if tax policy and monetary policy are placed in what might be described as appropriate juxtaposition. Tax reduction would be used to initiate recovery and monetary policy would be used to counteract any inflationary tendencies which might develop later. (Inflation could develop only after full employment and full output levels have been reached. Therefore, it is to be measured by a quickening rise in wage rates, a diminishing rate of decrease in unemployment, and a quickening rise in prices relative to lessening rate of increase in real output).

The firm application of monetary policy checks in May and June of 1953 showed that the monetary authorities can act effectively and that their action need not endanger the banking system as many had predicted in their arguments for 100 per cent support prices for government securities.

Need for Continued Liquidity

Only one policy for longer run economic growth is considered here because many powerful forces are working toward economic

expansion. These include population growth, increased expenditures for research, and a greatly increased economic understanding by the people. The one recommendation for the future is to take steps to insure the continued liquidity of the economy.

According to the Controller of the Currency, the national banks of the United States were 62 per cent liquid on January 30, 1954. This is a high degree of liquidity and it has yielded great fruit in the post-war years. It is true, of course, that in the war years *excessive* liquidity was created by the sale of government securities to commercial banks. At the end of World War II, this excessive liquidity fed the inflation which had only been suppressed by direct controls during the war years.

A growing and expanding economy must concern itself meticulously with the continuous creation of liquidity. The lack of liquidity in the past has given the deep economic recessions of 1933, 1921, 1893, 1873, 1857 and 1837 as well as the more simple "money panic" of 1907. Our objective must be to prevent a recurrence of these collapses produced by deficiencies in liquidity. Today bank deposits are about 180 billion dollars and the "liquidity share" of bank assets is somewhat more than 100 billion dollars, or more than 62 per cent of total deposits. This is, to be sure, more than adequate for today's total bank liabilities. But I am sure this liquidity is going "to run out". A moderate growth in bank deposits (bank liabilities) would produce 2,000 billion dollars of bank deposits in the year 2000.

If we should have bank obligations of that size, we will need a banking system which is at least twenty per cent liquid, or better, 25 per cent. This will call for a liquidity in absolute amount of about four hundred to five hundred billion dollars. We all can readily appreciate that is far short of the liquidity which is likely to be had by the banking system on a basis of a scanning of all the liquid assets which might come to the banks.

Thus we could say that we might, by 1973, be lulled into such a state of complacency by the liquidity we then shall have enjoyed for 28 years, that we could have a repetition of 1873. The banking system already is using a fair share of its liquid assets and certainly will be expanding its deposits as soon as we have further economic growth and expansion which is probably proceeding at the very present time.

This problem I have sketched is indeed a long-run problem. It is a problem of about the next 15 years. But the experience we have had with it in the past suggests how important liquidity will be in the future.

PRIMITIVE EXPRESS

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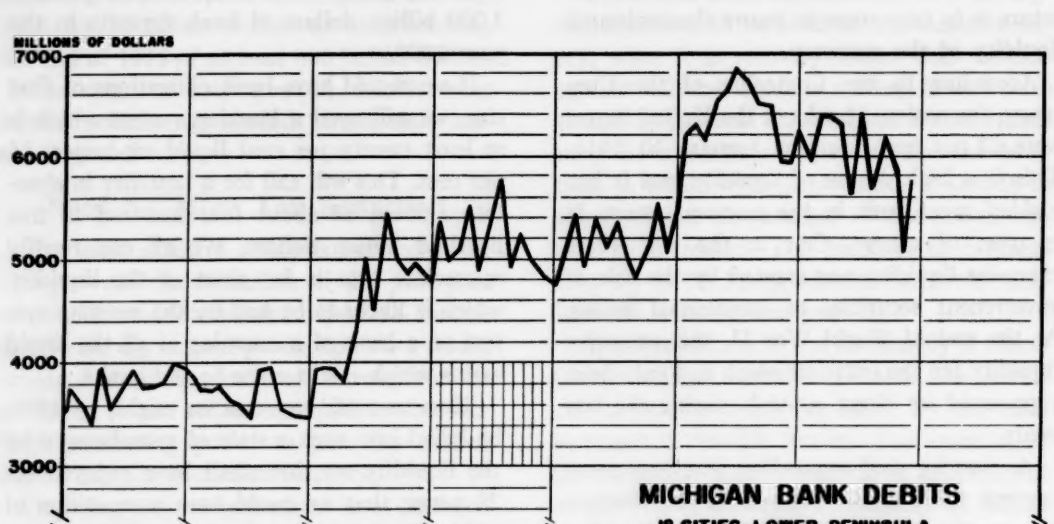

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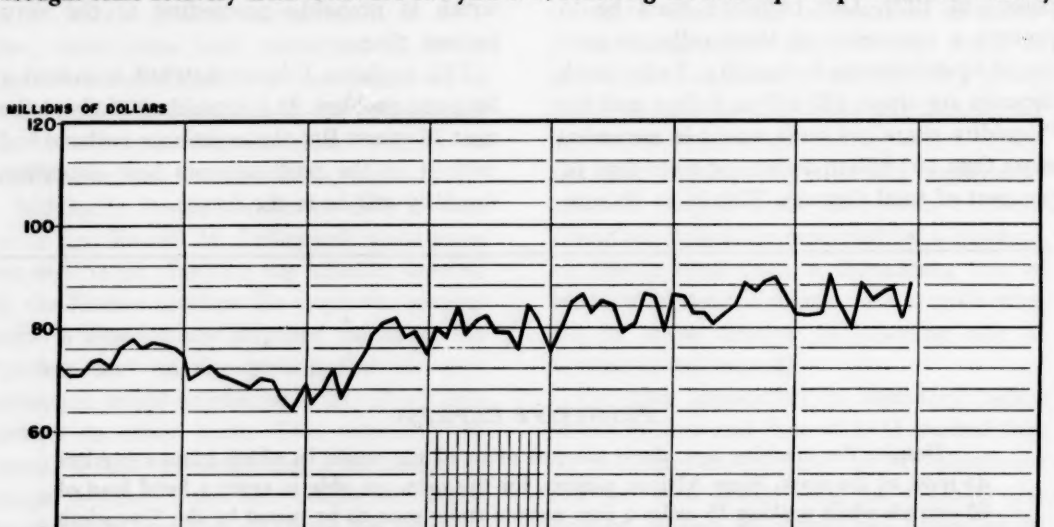

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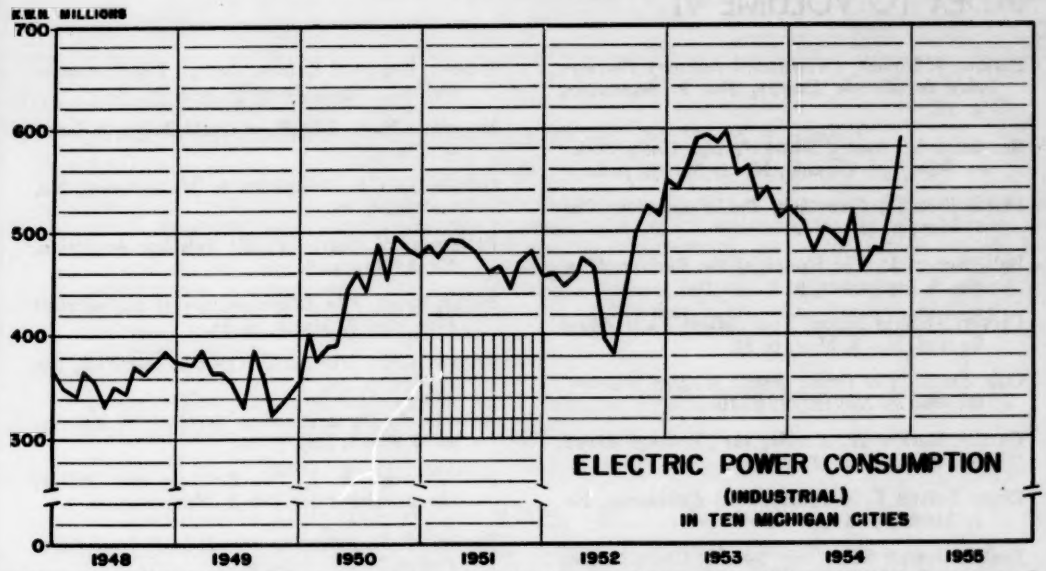

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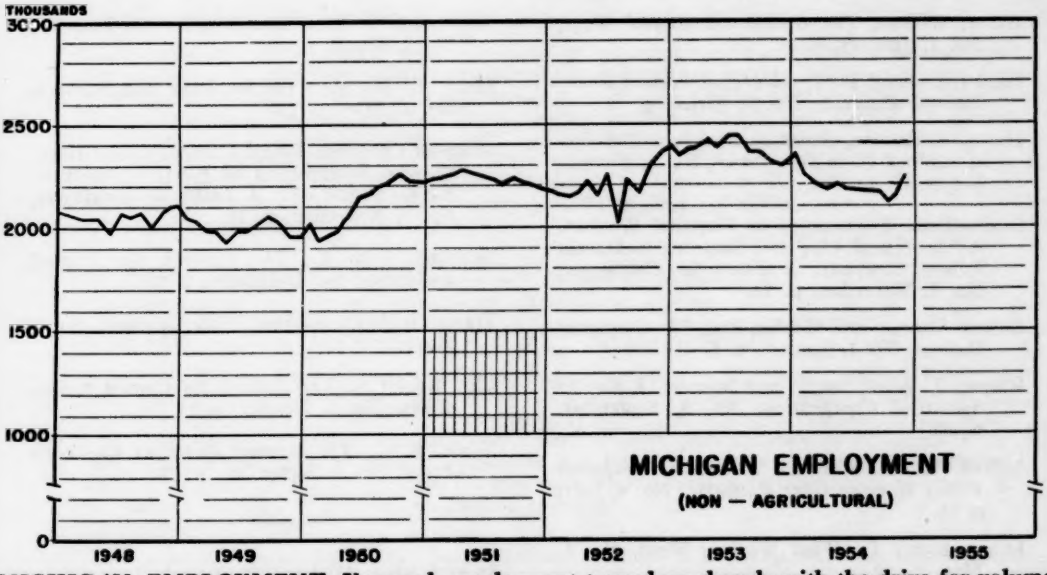

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